Child Physical Abuse and Neglect

Samantha Schilling, MD[a,*], Cindy W. Christian, MD[b,c]

KEYWORDS

• Child maltreatment • Mandatory reporting • Child welfare • Child Protective Service

KEY POINTS

- Child maltreatment is common.
- Child physical abuse and neglect are 2 forms of child maltreatment.
- The maltreatment of children is a public health problem.
- There are possible lifelong consequences of child maltreatment to health and well-being.
- Additional resources are needed for the treatment and prevention of child maltreatment.
- Identifying suspected maltreatment and reporting concerns to child welfare can be one of the most challenging and important responsibilities of the pediatric health care provider.

INTRODUCTION

Since the early 1960s, public recognition of child abuse and neglect has improved considerably. The US Government enacted the Child Abuse Prevention and Treatment Act in 1974, which defines maltreatment of a child as "any recent act or failure to act on the part of a parent or caretaker, which results in death, serious physical or emotional harm, sexual abuse or exploitation, or an act or failure to act which presents an imminent risk of serious harm."[1] Decades of research and clinical experience reveal that child abuse and neglect is a public health problem with lifelong health consequences for survivors.[2] Much has been learned about the factors that contribute to the abuse of a child and about characteristics that may prove protective. Despite the progress made, the problem remains widespread and serious. Programs to prevent and intervene in child maltreatment remain fragmented, and a more comprehensive and collaborative approach to public policy concerning child safety and health is needed. The topics of child physical abuse and neglect are discussed in this article. Murray discusses child sexual abuse elsewhere in this issue, and the impact of intimate partner violence on children is discussed in the article by MacMillan.

[a] Child Abuse Pediatrics, The Children's Hospital of Philadelphia, 34th Street and Civic Center Boulevard, Philadelphia, PA 19104, USA; [b] Child Abuse and Neglect Prevention, The Children's Hospital of Philadelphia, 34th Street and Civic Center Boulevard, Philadelphia, PA 19104, USA; [c] Pediatrics, The Perelman School of Medicine, The University of Pennsylvania, Philadelphia, PA, USA
* Corresponding author.
E-mail address: Schillings@email.chop.edu

Child Adolesc Psychiatric Clin N Am 23 (2014) 309–319
http://dx.doi.org/10.1016/j.chc.2014.01.001 **childpsych.theclinics.com**
1056-4993/14/$ – see front matter

EPIDEMIOLOGY

Each year in the United States, Child Protective Service (CPS) agencies receive more than 3 million reports of suspected child maltreatment and investigate more than 2 million of these reports; more than 650,000 children are substantiated by child welfare as maltreatment victims.[3] Most maltreated children are victims of neglect (78.5%), 17.6% are victims of physical abuse, and 9.1% are victims of sexual abuse. More than 1500 child deaths are attributed annually to child abuse or neglect.[3] However, these numbers reflect official investigations and represent only a portion of the children who suffer from maltreatment. For example, data from the Adverse Childhood Experiences studies indicate that 27% of adult women and 30% of adult men are estimated to have been physically abused during childhood, suggesting very high rates of undocumented child maltreatment.[4]

Recent child welfare statistics suggest that the incidence of child abuse and neglect is decreasing. However, child welfare data represent only those cases investigated and confirmed by state child welfare agencies, and thus are influenced by changes in reporting practices, investigation and legal standards, and administrative or statistical procedures.[5] By contrast, researchers examining hospitalization rates for physical abuse have shown either no significant recent changes or recent modest increases in hospitalizations for physical abuse.[6,7]

RISK FACTORS

Child abuse and neglect result from a complex interaction of child, caregiver, and environmental factors. Although child physical abuse and neglect affect children of all ages, ethnicities, and sociodemographic backgrounds, particular factors increase maltreatment vulnerability, and specific situations more commonly trigger maltreatment. Most often multiple factors coexist and are interrelated, increasing the risk for maltreatment of the child.[8]

Child characteristics that predispose a child to maltreatment include those that make a child more difficult to care for, or are in contrast to parental expectations. Examples include children with special health care needs, chronic illnesses, or physical or developmental disabilities.[9] Physical aggression, resistance to parental direction, and antisocial behaviors also more commonly characterize maltreated children.[10] These children exhibit poor emotional regulation, distractibility, negative affect, and a resistance to following directions.[11] A child born prematurely may present special needs, and early and at times prolonged separation may contribute to an increased vulnerability to maltreatment.[12] Although adolescents are more likely than younger children to suffer physical abuse and neglect, because of their smaller size and less mature developmental capacity, infants and toddlers are particularly vulnerable to severe and fatal maltreatment.[13]

Factors that decrease a parent's ability to cope with stress and, therefore, increase the potential for maltreatment include low self-esteem, poor impulse control, and substance abuse.[14] Other parental characteristics associated with child maltreatment include young age, low educational achievement, and mental illness.[15] In addition, parents who were themselves victims of child maltreatment are more likely to have children who are abused and neglected.[16] Parents who maltreat their children are more likely to have unrealistic developmental expectations for child behavior and to have a negative perception of normal behavior. In addition, parents with punitive parenting styles are more likely to maltreat their children.[16]

High-stress situations can increase the potential for child abuse and neglect. Circumstances that occur during the course of normal child development, including colic,

nighttime awakenings, and toilet training, are potential triggers for maltreatment.[8] In particular, crying is a common trigger for abusive head trauma.[17] Infant crying generally peaks between 2 and 4 months, and the incidence of abusive head trauma parallels this crying trajectory.[18] Accidents surrounding toilet training are another potential trigger. Immersion burns may be inflicted in response to encopresis or enuresis when a caregiver believes that children should be able to control these bodily functions.[19] The average age of children who have been intentionally burned is 32 months, by which time abusive parents may have expected mastery of bodily functions.[8]

The absence of a robust family social support system places the child at increased risk for maltreatment.[20] Poverty and unemployment are also associated with maltreatment.[20] Young children who live in households with unrelated adults are at exceptionally high risk for physical abuse.[21] Children living in homes with intimate partner violence are at increased risk of being physically abused, in addition to suffering the negative emotional, behavioral, and cognitive consequences from exposure to this family violence.[22,23]

Finally, all of these child, parent, and environmental factors may interact to increase the child's vulnerability to maltreatment. Even if no single factor would be sufficient to overwhelm the caregiver, the combination of stresses may precipitate an abusive crisis.[8]

DEFINITIONS

Federal and state laws define child abuse and neglect. Each state determines the process for investigating abuse, protecting children, and holding perpetrators accountable for their actions or inactions. The Federal Child Abuse Prevention and Treatment Act provides minimum standards to states for defining maltreatment; however, states have the responsibility for specifically defining child abuse for their constituents.[1] State laws vary widely, and defining terms used by states such as "risk of harm," "substantial harm," "substantial risk," and "reasonable discipline" may not be further clarified in legislation, leading to inconsistent interpretations. Some state statutes require "serious bodily injury" or "severe pain" to define abuse, and such subjectivity may hinder consistent and appropriate reporting practices.

Physical Abuse

Although injury to any organ system can occur from physical abuse, some injuries are more common. Bruises, the most common injury resulting from physical abuse, are universal in active children, and are therefore nonspecific. Bruises suggestive of abuse include those that are patterned, such as slap marks or marks caused by a looped extension cord. Bruises in healthy children tend to be distributed over bony prominences; bruises isolated to the torso, ears, or neck should raise concern.[24] Bruises in nonambulatory infants are unusual, and are highly concerning for physical abuse.[25] Approximately 10% of children hospitalized with burns are victims of abuse.[26] Inflicted burns can be the result of contact with hot objects and from immersion injuries. In contrast to accidental scald injuries, these burns have clear demarcation, uniformity of burn depth, and a characteristic pattern.[26] Unexplained fractures, fractures in nonambulatory infants, and the presence of multiple fractures raise suspicion for physical abuse.[27] Certain fracture types also have a high specificity for abuse, such as rib fractures and classic metaphyseal lesions seen in infants. Intentional blunt trauma to the abdomen can result in solid organ and hollow viscus injury. Abusive head trauma is the leading cause of mortality and morbidity from physical abuse.[3] Common findings include subdural hemorrhages, cerebral edema, hypoxic-ischemic injury, and retinal hemorrhages.

Neglect

Neglect occurs when a child's basic needs are not adequately met. Basic needs include food, clothing, stable housing, supervision, protection, health care, education, love, and nurturance. The degree to which children's needs are met falls within a spectrum ranging from ideal to completely inadequate. Extreme situations are easily identified, but most cases are complex and lack precise clarity. Child neglect is a heterogeneous phenomenon varying in type, severity, and chronicity. Both actual and potential harm are of concern. In addition, although much neglect is recognized by an ongoing pattern of poor care, when serious risks are involved single, momentary lapses in care may also constitute neglect.

CLINICAL OUTCOMES

Adverse childhood experiences, including physical abuse and neglect, alter the architecture and function of the developing brain, and influence the neuroendocrine stress response and immune system function.[28] These physiologic disruptions can persist far into adulthood, and lead to lifelong poor physical and mental health.[28] Indeed, more than 80 scientific articles have been published elucidating the multitude of poor health outcomes experienced by adults who were maltreated as children.[4] Childhood maltreatment and family dysfunction produce poor adult health, indirectly via the adoption of high-risk behaviors and maladaptive coping mechanisms, and directly via biological injury. The lifelong consequences are profound, and as diverse as cardiovascular disease,[29] liver cancer,[30] asthma,[31] chronic obstructive pulmonary disease,[32] autoimmune disease,[33] poor dental health,[34] and depression.[35] Furthermore, there is a cumulative effect of traumatic childhood exposures: the more maltreatment, family dysfunction, and social isolation a child experiences, the higher the risk for poor health in adulthood.[36]

Maltreated children also exhibit high rates of physical, developmental, and mental health deficits during childhood. Victims of physical abuse and neglect are more likely to develop a variety of behavioral problems including conduct disorders, aggressive behaviors, poor academic performance, and decreased cognitive functioning.[10,37,38] Other health problems that afflict these vulnerable children include growth failure, obesity, lead poisoning, untreated vision and dental problems, infectious and atopic dermatitis, asthma, infectious diseases, and a range of chronic medical diseases.[39]

THERAPEUTIC STRATEGIES

Prevention and treatment of child maltreatment are complex and challenging. Many of the approaches developed by child welfare agencies, health care providers, therapists, and others have not been rigorously tested, and many families suffer from chronic dysfunction and a multitude of challenges that require broad approaches to management. In addition to addressing the consequences of poverty, substance abuse, mental health, and other common problems encountered by families involved with child welfare, at the core the relationship between parents and children requires intervention. Some strategies in this regard have shown promise.

According to a national panel of child maltreatment experts, Abuse Focused Cognitive Behavioral Therapy (AF-CBT) and Parent-Child Interaction Therapy (PCIT) are the 2 best-practice intervention protocols for the treatment of physical abuse.[40] Both are dyadic interventions designed to alter specific patterns of interaction found in parent-child relationships. AF-CBT represents an approach to working with abused children and their offending caregivers based on learning theory and behavioral principles that

target child, parent, and family characteristics related to the maltreatment.[41] The approach is designed to promote the expression of appropriate/prosocial behavior and to discourage the use of coercive, aggressive, or violent behavior. PCIT is a highly specified, step-by-step, live-coached behavioral parent training model. Immediate prompts are provided to a parent by a therapist while the parent interacts with their child. Over the course of 14 to 20 weeks, parents are coached to develop specific positive relationship skills, which then results in child compliance to parent commands.[42,43]

HEALTH CARE PROVIDER MANDATES FOR REPORTING

In every state, health care providers are mandated by law to identify and report all cases of suspected child abuse and neglect. It is the responsibility of CPS to investigate reports of suspected abuse to ensure the ongoing safety of the child. Law enforcement investigates crimes such as serious physical abuse or neglect for possible criminal charges against a perpetrator. Much of the abuse that is recognized by health care providers does not get reported to CPS for investigation.[44] In part this is because clinicians may incorrectly believe that making a report requires certainty in their diagnosis of child abuse, rather than having a reasonable suspicion for maltreatment as the law requires. In addition, many clinicians believe that reporting to CPS is not an effective intervention, and distrust the ability of the child welfare system to protect children.[45]

Health care provider cooperation with CPS investigations is critical to effective decision making by investigators. Health Insurance Portability and Accountability Act (HIPAA) rules allow disclosure of protected health information to CPS without authorization by a legal guardian when the clinician has made a mandatory report, but state laws differ regarding the release of health information during and after investigations are complete.[46] Because CPS and law enforcement investigators do not have a medical background, the clinician's interpretation of the child's injuries in simple language that allows for a meaningful conversation with the investigators is critical for proper investigation, decision making, and protection of the child.[47]

CHALLENGES

Early Identification

Identifying and ensuring the health and safety of abused and neglected children is challenging. Although neglect is the most widespread form of child maltreatment and causes significant morbidity and mortality, the focus of public and professional attention is largely on physical and sexual abuse. Furthermore, neglect is difficult to define. For instance, although a health care provider might view repeated nonadherence to medications as neglect, unless harm has resulted from this inaction, this might not meet a state's CPS criteria for neglect.

Similarly, diagnosing physical abuse can be difficult. Witnesses to the abuse are uncommon, perpetrators infrequently disclose the abuse, child victims are often preverbal, too severely injured, or too frightened to disclose, and injuries can be nonspecific. Although the diagnosis of abuse can be challenging, there is abundant evidence that physicians often miss opportunities for early identification and intervention.[44,45] Previous sentinel injuries are minor injuries such as bruises or intraoral injuries that are noted before a diagnosis of child abuse. Such injuries are often identified by physicians, but are incorrectly attributed to accidental trauma or not reported to CPS for investigation despite physician suspicion for abuse.[44,48] Being cognizant of these sentinel injuries and recognizing and reporting suspected abuse and neglect can

save the life of a child, and can protect the child from a lifetime of the physical and mental health sequelae of ongoing maltreatment.

Addressing Mental Health Needs of Maltreated Children

Between 50% and 80% of maltreated children have mental health problems.[49,50] Despite the need for mental health services by abused and neglected children, barriers exist to the delivery and use of services, and not all maltreated children who need treatment receive it or receive it in a timely fashion. Systemic barriers to the delivery of mental health services to maltreated children include lack of funding and accountability, few Medicaid providers, lack of cooperation among providers, waiting lists, and lack of appropriate services.[51] For instance, despite the demonstrated efficacy of AF-CBT and PCIT in treating physical abuse, there is little evidence that they are widely offered to abused children and their families.[40]

By contrast, studies have revealed that youth in foster care covered by Medicaid insurance receive psychotropic medications 3 times more often than Medicaid-insured youth not in foster care.[52] Furthermore, polypharmacy is highly prevalent, with more than 40% of the youth receiving 3 or more psychotropic drugs.[52] In response to these issues, the federal Fostering Connection to Success and Increasing Adoptions Act of 2008 and the Child and Family Services Improvement and Innovation Act require that states develop protocols for the appropriate use and monitoring of psychotropic medications for children in foster care.[53] These mandates have forced states to address these issues by improving behavioral health systems, developing preauthorization criteria for the use of psychotropic medications, identifying criteria for mandatory case reviews, and developing case-consultation systems for primary care providers.

Interdisciplinary Collaboration

The commitment to maltreated children includes a commitment to working outside of the health care community. Physicians need to collaborate with child welfare, judicial, and education colleagues to advocate for the health and well-being of these vulnerable children. In practice, coordination with other professionals to provide immediate and long-term treatment for maltreatment victims can be challenging. The collaborative process can be hindered by the lack of supportive agency–level structures and policies, inadequate resources, poor communication, differences in confidentiality policies, and a lack of knowledge of health providers about child welfare and legal systems (and vice versa). Intersystem collaboration is paramount to achieving the shared goal of ensuring the health and safety of children.

IMPORTANT TOOLS FOR PRACTICE

Ultimately, health care providers need to remain vigilant to the possibility of child maltreatment, be aware of their professional mandates, and be willing to advocate on behalf of these vulnerable patients. The extensive differential diagnosis of physical abuse depends on the type of injury, and requires careful, objective assessments of all children with suspected maltreatment. However, for children who present with pathognomonic injuries to multiple organ systems, an exhaustive search for medical diagnoses is unwarranted. All children younger than 24 months who present with suspicious injuries should undergo a skeletal survey looking for occult or healing fractures. Brain imaging may be indicated to screen for occult head trauma, particularly in young infants with multiple fractures, facial injuries, or rib fractures.

Reports should be made when there is reasonable cause to suspect abuse. In all states, the law provides some type of immunity for good-faith reporting. However,

failing to report may result in malpractice suits, criminal offenses, licensing penalties, and, most importantly, continued harm to the child. Mandated reporters must become familiar with their state-specific reporting procedures and laws. Some states require both verbal and written reports. Most states specify the types of information that should be included in a report of suspected abuse or neglect, such as the name and address of the child, the child's parents, the child's age, conditions in the child's home environment, the nature and extent of the child's injuries, and information about other children in the same environment. Information on state-specific laws about mandated reporting can be found at http://www.childwelfare.gov.

Optimal care for a maltreated child depends on the clinician's working knowledge of community resources that can provide safety, advocacy, treatment, and support. Health care providers are ideally positioned to help families enhance their ability to protect children and to address factors that put them at increased risk for maltreatment. Families trust and rely on their provider's guidance and referral to resources that prioritize the health and welfare of families; thus it is paramount that the provider becomes knowledgable about such local resources.

FUTURE DIRECTIONS

Future approaches to the prevention of child maltreatment and the protection of children require meaningful collaboration between child welfare, judicial, education, health, and mental health professionals and systems. There have been recent calls for more rigorous legislative requirements for the reporting of child abuse.[54] Both federal and state legislation can improve laws to protect children and mandate improved interdisciplinary work. For example, identifying HIPAA exceptions that allow for information sharing across systems when children are placed in foster care would reduce real and perceived barriers to the information sharing that is needed to address the health needs of children in care. Health care providers require training on the effects of child maltreatment and toxic stress, assessment tools for primary care providers are needed to identify families and children in need of intervention and support, effective behavioral and treatment strategies need to be identified and adopted broadly, and the behavioral and mental health systems in the country require expansion to meet the needs of the population.

Reducing rates of maltreatment, supporting families, and improving pediatric and adult health outcomes for maltreatment victims requires community-wide strategies and a multisystem public health approach. Future policies and practices must address the overutilization of psychotropic medications in this vulnerable population, and ensure that maltreated children and their families have access to mental health treatments that have been studied and shown to be effective. Equally important is prioritizing permanency and stability for children in foster care, as 1 in 3 of these children fail to achieve a long-lasting placement.[55] Finally, the prevalence of child maltreatment may decline further when policy makers, health care providers, and applicable systems refine, promote, and implement effective prevention strategies that augment current treatments.

SUMMARY

Few problems have as profound an impact on the health and well-being of children as child abuse and neglect. Experiencing child maltreatment increases the risk of developing behaviors in adolescence and adulthood that predict adult morbidity and early mortality. The child welfare, foster, and health care systems have struggled to collaborate to address the health needs of children who have been maltreated. Although

recognizing maltreatment and advocating for the safety of a child is a great challenge, intervening on behalf of a vulnerable child has the potential to greatly improve the child's future health outcomes and life trajectory.

REFERENCES

1. CAPTA, The CAPTA Reauthorization Act of 2010, Public Law 111-320, (42 U.S.C. 5106a). Available at: http://www.acf.hhs.gov/programs/cb/laws_policies/cblaws/capta/capta2010.pdf. Accessed November 10, 2013.
2. Middlebrooks JS, Audage NC. The effects of childhood stress on health across the lifespan. Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2008.
3. U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. 2012. Child maltreatment 2011. Available at: http://www.acf.hhs.gov/programs/cb/research-data-technology/statistics-research/child-maltreatment. Accessed November 10, 2013.
4. Adverse Childhood Experiences (ACE) Study. Prevalence of individual childhood experiences. Atlanta, GA: Centers for Disease Control and Prevention; 2013. Available at: www.cdc.gov/ace/prevalence.htm. Accessed November 10, 2013.
5. Jones L, Finkelhor D. Updated trends in child maltreatment. Crimes Against Children Research Center. 2007. Available at: www.unh.edu/ccrc/pdf/Updated%20Trends%20in%20Child%20Maltreatment%202007.pdf. Accessed November 10, 2013.
6. Leventhal JM, Gaither JR. Incidence of serious injuries due to physical abuse in the United States: 1997 to 2009. Pediatrics 2012;130:e847–52.
7. Farst K, Ambadwar PB, King AJ, et al. Trends in hospitalization rates and severity of injuries from abuse in young children, 1997-2009. Pediatrics 2013;131:e1796–802.
8. Flaherty EG, Stirling J, The Committee of Child Abuse and Neglect. The pediatrician's role in child maltreatment prevention. Pediatrics 2010;126:833–41.
9. Hibbard RA, Desch L, The Committee on Child Abuse and Neglect and the Council on Children with Disabilities. Maltreatment of children with disabilities. Pediatrics 2007;119:1018–25.
10. Kolko DJ. Characteristics of child victims of physical violence: research findings and clinical implications. J Interpers Violence 1992;7:244–76.
11. Shields A, Cicchetti D. Reactive aggression among maltreated children: the contributions of attention and emotion dysregulation. J Clin Child Psychol 1998;27:381–95.
12. Wu SS, Ma C, Carter RL, et al. Risk factors for infant maltreatment: a population-based study. Child Abuse Negl 2004;28:1253–64.
13. Finkelhor D, Ormrod R, Turner H, et al. The victimization of children and youth: a comprehensive, national survey. Child Maltreat 2005;10:5–25.
14. Kelleher K, Chaffin M, Hollenberg J, et al. Alcohol and drug disorders among physically abusive and neglectful parents in a community-based sample. Am J Public Health 1994;84:1586–90.
15. Sidebotham P, Heron J. Child maltreatment in the "children of the nineties": a cohort study of risk factors. Child Abuse Negl 2006;30:497–522.
16. Oates RK, Davis AA, Ryan MG. Predictive factors for child abuse. Aust Paediatr J 1980;16:239–43.

17. 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;22:91–101.
18. 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;30:7–16.
19. Daria S, Sugar N, Feldman KW, et al. Into hot water head first: distribution of intentional and unintentional immersion burns. Pediatr Emerg Care 2004;20: 302–10.
20. Kotch JB, Browne DC, Dufort V, et al. Predicting child maltreatment in the first 4 years of life from characteristics assessed in the neonatal period. Child Abuse Negl 1999;23:305–19.
21. Schnitzer PG, Ewigman BG. Child deaths resulting from inflicted injuries: household risk factors and perpetrator characteristics. Pediatrics 2005;116: e687–93.
22. Christian CW, Scribano P, Seidl T, et al. Pediatric injury resulting from family violence. Pediatrics 1997;99:e8.
23. Holt S, Buckley H, Whelan S. The impact of exposure to domestic violence on children and young people: a review of the literature. Child Abuse Negl 2008; 32:797–810.
24. Pierce MC, Kaczor K, Aldridge S, et al. Bruising characteristics discriminating physical child abuse from accidental trauma. Pediatrics 2010;125:67–74.
25. Sugar NF, Taylor JA, Feldman KW. Bruises in infants and toddlers: those who don't cruise rarely bruise. Arch Pediatr Adolesc Med 1999;153:399–403.
26. Purdue GF, Hunt JL, Prescott PR. Child abuse by burning—an index of suspicion. J Trauma 1988;28:221–4.
27. Leventhal JM, Thomas SA, Rosenfield NS, et al. Fractures in young children: distinguishing child abuse from unintentional injuries. Am J Dis Child 1993;147: 87–92.
28. Shonkoff JP, Garner AS. The lifelong effects of early childhood adversity and toxic stress. Pediatrics 2012;129:e232–46.
29. Dong M, Giles WH, Felitti VJ, et al. Insights into causal pathways for ischemic heart disease: adverse childhood experiences study. Circulation 2004;110: 1761–6.
30. Dong M, Dube SR, Felitti VJ, et al. Adverse childhood experiences and self-reported liver disease: new insights into the causal pathway. Arch Intern Med 2003;163:1949–56.
31. Haczku A, Panettieri RA. Social stress and asthma: the role of corticosteroid insensitivity. J Allergy Clin Immunol 2010;125:550–8.
32. Anda RF, Brown DW, Dube SR, et al. Adverse childhood experiences and chronic obstructive pulmonary disease in adults. Am J Prev Med 2008;34: 396–403.
33. Dube SR, Fairweather D, Pearson WS, et al. Cumulative childhood stress and autoimmune diseases in adults. Psychosom Med 2009;71:243–50.
34. Poulton R, Caspi A, Milne BJ, et al. Association between children's experience of socioeconomic disadvantage and adult health: a life-course study. Lancet 2002; 360:1640–5.
35. Edwards VJ, Holden GW, Felitti VJ, et al. Relationship between multiple forms of childhood maltreatment and adult mental health in community respondents: results from the adverse childhood experiences study. Am J Psychiatry 2003;160: 1453–60.

36. Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: the adverse childhood experiences (ACE) study. Am J Prev Med 1998;14:245–58.
37. Hildyard KL, Wolfe DA. Child neglect: developmental issues and outcomes. Child Abuse Negl 2002;26:679–95.
38. Perez CM, Widom CS. Childhood victimization and long-term intellectual and academic outcomes. Child Abuse Negl 1994;18:617–33.
39. Steele JS, Buchi KF. Medical and mental health of children entering the Utah foster care system. Pediatrics 2008;122:e703–9.
40. Closing the quality chasm in child abuse treatment: identifying and disseminating best practices. Chadwick Center for Children and Families and National Call to Action. 2004. Available at: http://www.chadwickcenter.org/Documents/Kaufman%20Report/ChildHosp-NCTAbrochure.pdf. Accessed November 10, 2013.
41. Kolko DJ, Swenson CC. Assessing and treating physically abused children and their families: a cognitive behavioral approach. Thousand Oaks (CA): Sage Publications; 2002.
42. Timmer SG, Urquiza AJ, Zebell NM, et al. Parent-child interaction therapy: application to maltreating parent-child dyads. Child Abuse Negl 2005;29:825–42.
43. Chaffin M, Silovsky JF, Funderburk B, et al. Parent-child interaction therapy with physically abusive parents: efficacy for reducing future abuse reports. J Consult Clin Psychol 2004;72:500–10.
44. Sheets LK, Leach ME, Koszewski IJ, et al. Sentinel injuries in infants evaluated for child physical abuse. Pediatrics 2013;131:701–7.
45. Jones R, Flaherty EG, Binns HJ, et al. Clinicians' description of factors influencing their reporting of suspected child abuse: report of the child abuse reporting experience study research group. Pediatrics 2008;122:259–66.
46. The Committee on Child Abuse and Neglect. Child abuse, confidentiality, and the Health Insurance Portability and Accountability Act. Pediatrics 2010;125:197–201.
47. Kellogg ND, The Committee on Child Abuse and Neglect. Evaluation of suspected child physical abuse. Pediatrics 2007;119:1232–41.
48. Flaherty EG, Sege RD, Griffith J, et al. From suspicion of physical child abuse to reporting: primary care clinician decision-making. Pediatrics 2008;122:611–9.
49. Leslie LK, Jeanne GN, Lee M, et al. The physical, developmental, and mental health needs of young children in child welfare by initial placement type. J Dev Behav Pediatr 2005;26:177–85.
50. McMillen JC, Zima BT, Scott LD, et al. Prevalence of psychiatric disorders among older youths in the foster care system. J Am Acad Child Adolesc Psychiatry 2005;44:88–95.
51. Staudt MM. Mental health services utilization by maltreated children: research findings and recommendations. Child Maltreat 2003;8:195–203.
52. Zito JM, Safer DJ, Sai D, et al. Psychotropic medication patterns among youth in foster care. Pediatrics 2008;121:e157–63.
53. U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. 2012. Effective use of psychotropic medication for children in foster care. Available at: http://www.nrcpfc.org/fostering_connections/download/IM%20Oversight%20of%20Psychotropics%20Medication%20for%20Children%20in%20Foster%20Care-Title%20IV-B%20Health%20Care%20Oversight%20%20Coordination%20Plan.pdf. Accessed November 20, 2013.

54. Task Force on Child Protection Joint State Government Commission. General Assembly of the Commonwealth of Pennsylvania. Child protection in Pennsylvania: proposed recommendations. 2012. Available at: http://jsg.legis.state.pa.us/resources/documents/ftp/publications/2012-285-Child%20Protection%20Report%20FINAL%20PDF%2011.27.12.pdf. Accessed November 20, 2013.
55. Rubin DM, O'Reilly AL, Luan X, et al. The impact of placement stability on behavioral well-being for children in foster care. Pediatrics 2007;119:336–44.