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Editors

A Practical Guide to the Evaluation of Child Physical Abuse and Neglect

Second Edition

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To our senior institutional leaders who create the academic and clinical environment that permits us to advocate for vulnerable children and families by writing books such as this. These visionary leaders consistently encourage us and our colleagues to embrace the responsibility to challenge our professional beliefs by constantly reviewing our work and making changes to our practices and approaches as the evidence emerges and calls for such changes to be made:

Christopher M. Born
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APG
MAL
ERG

Foreword

As we near the 50th anniversary of the landmark article by C. Henry Kempe and his colleagues entitled "The Battered Child Syndrome", which ushered in the modern era of professional attention by pediatricians and other child health professionals, we have reason for both celebration and concern. We can take heart that over the recent five decades, a great deal of professional attention focused on the problem of child abuse and neglect. In every state of the country, there are mandatory reporting laws that require nurses, physicians, and social workers to report suspicions of maltreatment to the appropriate authorities for investigation. The act of reporting provides legal immunity to the reporter except when performed in bad faith. Progress in understanding the factors that place children at risk for harm from physical abuse and neglect now permits prevention and intervention. The peer-reviewed literature dealing with child abuse and neglect has proliferated with high quality work being done and reported on the many dimensions related to the epidemiology, mechanism, treatment, and prognosis of child maltreatment. Efforts are being directed toward developing an evidence-based approach to the prevention of child abuse and neglect. These are some of the positives. However, negatives exist and remain reasons for concern. Despite a tremendous amount of attention to the problem of maltreatment, there are at least 3 million reports of suspected child abuse and neglect made annually, with nearly 1 million cases being substantiated. While the incidence has been declining recently, it still remains at an unacceptable level. A single case is one too many. There is increased awareness among both the professional and lay members of our society. Underreporting continues to be a problem. There is a different standard for health professionals reporting suspected child abuse and a layperson reporting the same. The work of Jenny and colleagues documented that victims of abuse are often missed on initial evaluations by physicians. This group of patients presents on subsequent visits with more serious signs of abuse. This book represents a valuable and current resource for health professionals who can use it to guide the evaluation of children suspected of abuse or neglect.

On the international scene, there may be even more reason for concern about all forms of violence toward children, including in large part, the risk for child abuse and neglect by the child's own caregivers. In 2006, the "World Report on Violence against Children" presented to the Secretary General of the United Nations, began with: "The central message of the study is that no violence against children can be justified; all violence against children can and must be prevented. Every society, no matter its cultural, economic or social background can and must stop every form of violence. A multidimensional approach, grounded in human rights principles and guided by evidence-based research is urgently needed to prevent and respond to violence in all circumstances." Quantifying the actual number of child maltreatment victims globally is difficult because of variations in definitions from nation to nation, limited data collection efforts and the tragic realization that some forms of violence against children are socially acceptable in some parts of the world and indeed may be legal and occasionally State-sponsored.

In critical care we often provide care to child abuse victims and families who suffer from the more extreme effects of inflicted injuries. Rigorous work in the field of outcome measures determines that victims of child abuse have longer hospital length of stay, more complications and difficulties in discharge planning on average when compared to children with non-inflicted injuries. They are also more likely to be readmitted to hospitals. Each year, at least 1,500 children are known to die as a result of child abuse and neglect. Recent estimates show that 90% of the fatal cases of child abuse and neglect are in children under three years of age and more than 60% are in children under one year of age. At Texas Children's Hospital, the Chair of Pediatrics in 2004, Dr. Ralph D. Feigin, addressed the fact that more children died as a result of abuse than malignancy. Texas Children's responded by building a well-organized and strong child protection team to assist our community in evaluating suspected cases, training large numbers of health care professionals and child advocates in how best to recognize child maltreatment and then to comply with the mandated reporting responsibility. Additionally, the team has an academic component to engage in further work in our understanding of the multiplicity of aspects of this social problem.

We have traveled a long journey toward dealing with child abuse and neglect. This book represents a practical contribution to the understanding and evaluation of child maltreatment.

Houston, TX
July 2009

Fernando Stein, MD

Foreword for First Edition, 1997

The study of the condition we label child abuse and neglect is the study of all parents' struggle to raise their children and, in particular, the study of those who went wrong in some way. Parenting is a complex and sometimes frustrating role. It is a job for which there is no single charted pathway; there are many unexpected twists and turns, often few external supports, and always high societal expectation for competence. It is no wonder that some parents go astray and end up hurting their offspring rather than nurturing them. In fact, recent statistics indicate that more than 1 million children were abused or neglected in 1994, and more than 1,100 died as the result of abuse.

In 1969, as a medical student, I attended a grand rounds given at St. Christopher's Hospital for Children in Philadelphia. The speaker was Ray Helfer, MD. The topic was child abuse. Dr. Helfer described his formulation of the etiology and pathophysiology of child abuse. There were three required elements: a vulnerable child, an abuse-prone parent, and a family stressor. It was described so simply, and it was analogous to the fuel, oxygen, and spark triad of the elements of fire. It was a captivating lecture, and one that stayed with me as I left medical school and went on to pediatric residency. Dr. Helfer had passed down a parcel of information and understanding in the best tradition of the great medical educators (of which he was a part).

In my 25 years of pediatric practice since that time, I have found that simple paradigm both true and untrue. It is true at its core, and the concepts have held up over time. But the study of child abuse and neglect has proven to be so much more. It has been more complex, more intricate, and more enigmatic than I ever imagined. The parents I have met along the way have been varied beyond description, from homeless unemployed to wealthy professionals. The children have presented every imaginable form of injury, from mild cutaneous trauma to traumatic death. They have varied in age from newborns to adolescents. Their stories have been remarkable in many ways and often tragic in that they could have been avoided. The family

stresses have also been many, and they also have changed over the course of time, including economic stress, substance abuse, and relationship problems. As background to the triad of abuse, there has been a societal factor: constant violence. Violence is woven through the entire cloth of our culture. Violence is so much a part of our daily lives that it is no wonder that our children are also its victims.

Throughout my career as physician and teacher, I have tried to impart an interest in and respect for the phenomenon that we recognize as child abuse. It is a study that has proven worth-while for me, and although it is not at as global a level as that of the late Dr. Helfer, I have been pleased to see some younger colleagues pick up the banner.

Such is the case of the book that follows. It is an excellent work of several young and dedicated authors who have them-selves studied child abuse and now stand ready to help others. The book stresses the recognition and initial management of child abuse. It is written clearly and succinctly. It follows a logical pattern that helps the practitioner in what is often a difficult and emotionally charged clinical situation. Although it is a compact reference, it is comprehensive and meticulous in its attention to detail. It is a book that will help the reader, just as that simple formulation of Ray Helfer's helped me so many times.

I congratulate the authors on their outstanding accomplishment and the publisher on its continued dedication to helping the helping professionals deal with the complex and challenging field of practice. All have helped children and their parents—there can be no more noble or important goal.

Philadelphia, PA Stephen Ludwig, MD

Preface

. . . something I learned in 1968 when I walked into the University of Colorado School of Medicine as a pediatric intern. I learned then, from [C.] Henry Kemp, that child abuse and neglect is not just a medical problem, a social problem, or a legal problem. It is ultimately a child's and a family's problem, and solving it requires each of us in medicine, social work, law enforcement, the judiciary, mental health, and all related fields to work together for that child and family.

Krugman (1991, p. 101)

Child abuse and neglect is a major threat to the health and well-being of children throughout the world. Maltreatment has long been know to occur primarily in the family setting and is a problem firmly rooted in the pattern of caregiving provided to the child (Ludwig & Rostain, 1992). Historical review and cultural studies indicate that caregivers have maltreated children in all cultures and nations of origin (Hobbs, Hanks, & Wynne, 1993; Korbin, 1987; Lazoritz, 1992; Levinson, 1989; Radbill, 1987; Solomon, 1973). Over the past decade, we have seen growth of the child protection movement, a steady increase in the professional literature dealing with child abuse and neglect, increased public awareness of the issues surrounding child maltreatment, and the promulgation and enactment of model legislation. Despite a greater focus on the issues of abuse, child abuse and neglect remain a major problem facing children and families today (CM, 2008).

The revised manual, *A Practical Guide to the Evaluation of Child Physical Abuse and Neglect (2nd edition),* is intended as an updated resource for health care professionals. Many of the new photographs that have been included in this revision came from the teaching archive at Texas Children's Hospital and we recognize the dedication and commitment of medical photographer, Jim deLeon, who tirelessly sought to serve children and families during his quarter century of service at the hospital. It is the purpose of the text to help increase knowledge of abuse and provide easy access to basic information concerning the health care evaluation of a child suspected of

having been physically abused or neglected. The manual provides a framework from which to comprehensively evaluate the child and draws upon the most up to date literature for the available evidence to support best practices. The intended audience for the manual includes health care providers and related professionals who work with abused children, including physicians, nurses, nurse practitioners, clinical social workers, mental health professionals, and child protection workers. Law enforcement personnel and attorneys may use the manual as a resource when working with children and families. The text provides practical information with a balance between the areas of content and the comprehensiveness of material included. The authors include clinically relevant information to guide the initial interview, examination, and the ac-curate documentation of the evaluation of a child who may have been physically maltreated. Toward that end, the ultimate goal of this manual is to assist the professional in performing and documenting a complete and accurate evaluation.

The text uses the terms *health care professional* and *health care provider* interchangeably in recognition that many disciplines provide care to abused and neglected children and their families. The term *parenting* is often subsumed in the term *caregiving* to indicate the practices and actions to which the child is subject.

. . .a short historical reflection on professional attention to child abuse and neglect:

In undertaking the revision process to produce the second edition, we had the opportunity to reflect upon the professional journey that our field has been traveling upon. This is most clearly illustrated by the trajectory of our peer-reviewed literature regarding child abuse and neglect.

Although child abuse is as old as recorded history, it has become an issue for pediatricians only in the mid-20th century. John Caffey first described the association between subdural hemorrhage and long bone fractures in 1946 (Caffey, 1946). He recognized that both were traumatic in origin but did not recognize the causal mechanism. Caffey thought that trauma leading to these injuries was either unobserved or denied because of negligence. In one reported case, Caffey (1946) raised the possibility of inflicted trauma but stated that the "evidence was inadequate to prove or disprove [intentional mistreatment]" (p. 172). In the early 1950s, Frederic Silverman (1953) emphasized the repeated, inflicted nature of the trauma, despite denial by caregivers. Subsequent medical literature contained reports of abuse, but little attention was given to the issue. It was not until C. Henry Kempe and his colleagues coined the term "battered child" in 1962 that the medical and legal communities took action (Kempe, Silverman, Steele, Droegemueller, & Silver, 1962).

Within a few years, most states in the US had adopted abuse-reporting statutes (Heins, 1984). By 1967, all fifty states had some form of legislation regarding child maltreatment (Fontana & Besharov, 1979; Heins, 1984). Legislative efforts culminated in a 1974 federal statute called the Child Abuse Prevention and Treatment Act (PL 93-247). This law focused national concern on the prevention, diagnosis, and treatment of child abuse. Model legislation was part of this effort, and states were encouraged to evaluate their statutes and adequately address the issues of child abuse and neglect.

Of historical interest, Kempe first used the term battered child in a 1961 address to the American Academy of Pediatrics to describe young children who were victims of serious physical abuse. Subsequently, he and his colleagues published a study by the same name in 1962 (Heins, 1984; Kempe et al., 1962). The first description was of children generally younger than 3 years old, often with evidence of malnutrition and multiple soft tissue injuries. Subdural hemorrhages and multiple fractures were commonly found. Kempe et al. (1962) also included children with less severe or isolated injuries in their description of the battered child. Although any child with an inflicted injury has been battered, the term battered child is typically used to describe a child with repeated injuries to multiple organ systems. Health care providers who treat children should be able to identify those who are severely abused and injured and should know how to respond accordingly as well.

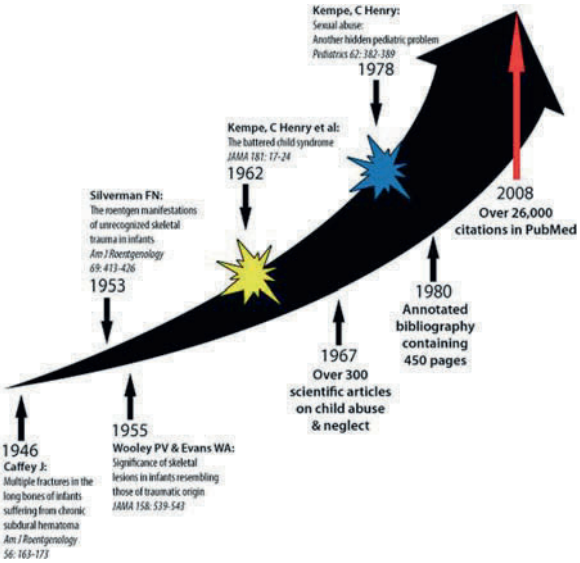
Fontana, Donovan, and Wong (1963) extended the early conceptualization of child abuse to include forms beyond physical injury by introducing the term maltreatment syndrome. Maltreatment included both battered children and children who were poorly fed and inadequately supervised. Fontana et al. (1963) added neglect to the evolving description of child abuse.

The original articles by Caffey (1946), Silverman (1953), Kempe et al. (1962), and Fontana et al. (1963) provide the modern medical history of child abuse. Their insight and persistence set the stage for the recognition of child abuse as a pediatric problem and resulted in an outpouring of medical, social, and psychological literature dealing with abuse and neglect.

Thirty years after the Kempe et al. (1962) article, Dr. Richard Krugman (1992), then the director of the C. Henry Kempe National Center for Prevention of Child Abuse and Neglect, observed how far the child protection movement had come in a short time. He compared the 1962 figure of 447 reported victims of battering to the 1991 estimate of 2.7 million reports of abuse (Krugman, 1992). Krugman stressed the staggering disparity between 447 cases and 2.7 million reports, even if not all reports of abuse result in a determination of maltreatment. In addition, Krugman (1992) observed that the 1991 estimate of 2.7 million reports of abuse did not account for the number of unreported cases that were either not suspected, misdiagnosed, or simply not reported. Figure 1 shows the exponential growth of the professional literature moving from occasional articles to and evidence base of hundreds and now thousands of peer-reviewed articles currently available.

Child abuse and neglect is now regarded as a public health problem throughout the globe. It is recognized as part of continuum of violence and victimization against the vulnerable that includes other forms of family violence as well. Paolo Sergio Pinheiro in his August, 2006 report to the UN General Secretary made clear that there can be no compromise in challenging violence against children: “Children’s uniqueness—their potential and vulnerability, their dependence on adults—makes it imperative that they have more, not less, protection from violence.” (The United Nations Secretary General’s Study on Violence Against Children, 2006, p. 5)

It is the responsibility of the health care professional to conduct the health care evaluation of the child suspected of having been abused or neglected, to consider a broad differential diagnosis, and to accurately identify the child’s condition based



on the information available. Working in the context of a multidisciplinary team, the health care provider then participates in the investigation and works to ensure proper medical and community action involves treating the child's existing injuries and ensuring protection from future injury.

. . . how the the book is organized:

The manual is organized into four main sections, as follows. Part I contains Chapters 1 and 2 which provide an overview on the phenomenon of child abuse and neglect and offer a general approach to the evaluation of the maltreated child. The need for a systematic and comprehensive approach in the evaluation of suspected child maltreatment cases is highlighted. In addition, the authors support an interdisciplinary evaluation to enhance attention to both physical and psychosocial aspects and to facilitate the development of comprehensive treatment plans that build upon each discipline's different skills and perspectives.

Part II, composed of Chapters 3, 4, 5, 6, 7, 8, and 9 address specific forms of maltreatment such as skin injury, abusive head trauma and neglect. Each of these chapters addresses mechanisms of the specific type of injury, characteristic findings, clinical approach, differential diagnosis, and proposed treatments where applicable. Some information is repeated in several chapters to allow for those providers who may need to use a specific chapter as a reference when working with a child with a given symptom or finding. When more detailed information is available in a related chapter, the reader is referred there as well. In addition, Chapter 9 concludes with current information on the evaluation of child fatalities including information on the postmortem examination.

Part III, includes Chapters 10, 11 and 12 and addresses the relationship of child maltreatment to children with special needs, the overlap of intimate partner violence with child maltreatment and on approaches to the prevention of child abuse and neglect. Finally, Part IV comprised of Chapters 13, 14, 15, and 16 covers a number of the issues related to the teamwork so essential to the evaluation and investigation of child abuse and neglect. Overarching team issues as well as specifics related to psychosocial assessment and interaction with the child protection system are addressed as well as, legal issues, and the important interface with mental health professionals that may occur in cases of suspected and substantiated abuse and neglect. These chapters are intended to give more detail regarding these critically important issues.

In conclusion, this manual is written to assist the health care provider in performing a systematic evaluation of the child suspected of abuse or neglect. It is our hope that as the clinician develops greater expertise in the evaluation of the maltreated child, he or she will recognize patterns suggestive of physical abuse and neglect more easily, be better able to complete the appropriate medical and psychosocial evaluations of the child, and become more cognizant of the ultimate responsibility to work with other professionals and agencies to ensure the safety and recovery of the victimized child. We believe that the needs of the child and family are best served by knowledgeable health care professionals who clearly understand their role as health care provider and child advocate. We agree with Dr. Krugman that in the final analysis, child abuse and neglect is a "child's and a family's" problem and we hope that this book helps health care professionals assist children and families as they confront this challenge.

Houston, TX

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Authors' Note

Every effort has been made to ensure that information concerning the recommended ordering of laboratory and diagnostic tests, the interpretation of laboratory values, and suggested drug dosages and usages stated in this manual are accurate and conform to the accepted standards at the time of publication. However, the reader is advised to consult printed information on each test or drug prior to ordering a study or administering any medication, especially when ordering unfamiliar tests or using infrequently used drugs.

Contents

Author Biographies

Eleanor J. Ashford, BA, received her Bachelor's degree in Journalism and Communications from Creighton University. She studied journalism abroad at New York University in London and then received her Masters in Global Communications from the American University of Paris.

Tal Ben-Galim, MD, is an Israeli board certified pediatrician and currently doing her second year of fellowship in Academic General Pediatrics in Baylor College of Medicine.

She was born and raised in Israel. After completing her military service as medical instructor she turned to medicine studies in Hadassah medical school in Jerusalem. She did her internship and residency in pediatrics in Sheba medical center, and practiced for over two years in two private practices after her graduation. In 2005, Dr Ben-Galim moved to US with her family. She started her fellowship in Academic General Pediatrics in July 2007. Dr Ben-Galim is in her second year of studies for Master in Public Health in University of Texas as part of her fellowship and taking Health Promotion as her major.

Her main interest is pediatric nutrition including childhood obesity and Failure to Thrive, and she intends to complete her thesis in this area.

Kelli Connell-Carrick, PhD, MSW, is an Assistant Professor at the University of Houston Graduate College of Social Work. Dr. Connell-Carrick has devoted her career to the children and families affected by child maltreatment. She has over 60 competitively selected publications and presentations in the areas of child maltreatment, neglect of infants and toddlers, substance abuse, foster care and aging out, and professional development of child welfare staff. She has also co-authored a two books, *Understanding Child Maltreatment: An Ecological and Developmental Perspective* published by Oxford University Press (with M. Scannapieco) and *Methamphetamine: What You Need to Know* (with Sallee, Liebe, Myers and Sallee) published by Eddie Bowers in 2007. She is published in such journal as *Child Welfare,*

Child and Adolescent Social Work, and *The Journal of Interpersonal Violence*. Dr. Connell-Carrick was the PI on a large federal grant from 2005 to 2008 that involved developing, delivering, evaluating and disseminating a training curriculum to CPS supervisors throughout the state of Texas on the needs of youth aging out of foster care. In 2004, Dr. Connell-Carrick won the Humanitate Award for Outstanding Literary Achievement from the North American Resource Center for Child Welfare. She is a faculty associate of the Office of Community Projects at the University of Houston Graduate College of Social Work and the University of Texas at Arlington Center for Child Welfare, and is involved in a statewide evaluation of retention and job training of CPS and adult protection workers.

Allan DeJong, MD, Clinical Professor of Pediatrics at Jefferson Medical College, has been managing suspected child physical and sexual abuse cases for over 30 years. He became the Director of the CARE Program (Child At Risk Evaluation) at the Nemours—Alfred I. duPont Hospital for Children in Wilmington, Delaware in 1994. Dr De Jong has been the Medical Director for the Children's Advocacy Center of Delaware (CACD) since it opened in 1996, and helped establish CACD sites in each of Delaware's three counties by 2003. Over the past twelve years these positions have evolved into a full time clinical practice for the evaluation of suspected abuse cases from Delaware, southeastern Pennsylvania, southwestern New Jersey and northeastern Maryland. Dr. De Jong has 32 publications in the field of child abuse. He is a member of the Ray Helfer Society, the Pennsylvania Attorney General's Medical/Legal Advisory Board for Child Abuse, and the Delaware Child Protection Accountability Commission.

Erin E. Endom, MD, is an Assistant Professor in the Department of Pediatrics, Baylor College of Medicine, and is a member of the section of Pediatric Emergency Medicine. In addition to her other clinical and academic responsibilities, Dr. Endom serves as an attending physician in the busy Texas Children's Hospital Emergency Center, where approximately 80,000 children are seen and cared for annually.

Dr. Endom received her M.D. degree in 1988 from the University of Texas Medical School in Houston, Texas and subsequently completed a 3-year pediatric residency in 1991 from Baylor College of Medicine affiliated hospitals. She is a subboard-certified pediatric emergency physician.

Her special interests include child abuse and neglect, and emergency and disaster preparedness. From 1998 to 2007, she served as the Pediatric Emergency Medicine section editor for the online medical textbook UpToDate (www.uptodate.com).

Angelo P. Giardino, MD, PhD, MPH, is the medical director of Texas Children's Health Plan, a clinical associate professor of pediatrics at Baylor College of Medicine, and an attending physician on both the Texas Children's Hospital Child Protection Team and the forensic pediatrics service at the Children's Assessment Center in Houston, Texas. In addition, Dr. Giardino serves as the physician advisor to the Texas Children's Hospital Center for Childhood Injury Prevention. Dr. Giardino earned his MD and PhD at the University of Pennsylvania and his MPH from the University of Massachusetts. Dr. Giardino completed his pediatric residency

and child maltreatment fellowship training at The Children's Hospital of Philadelphia (CHOP) and also completed training in secondary data analysis related to child maltreatment from the National Data Archive on Child Abuse and Neglect's Summer Research Institute at Cornell University.

Dr. Giardino's clinical work focuses on child maltreatment and in 1995 he collaborated with a multidisciplinary team to develop and lead the Abuse Referral Center for Children with Special Health Care Needs at the Children's Seashore House which was funded by a 3-year grant from a local philanthropy in Philadelphia. This program was designed to provide medical evaluations to children with developmental disabilities who were suspected of having been abused or neglected. In 1998, he was appointed associate chair for clinical operations in the Department of Pediatrics at CHOP and also served on the hospital's child abuse evaluation service. In 2002, Dr. Giardino joined the Department of Pediatrics at Drexel College of Medicine as the associate chair for clinical affairs and was appointed associate physician-in-chief at St. Christopher's Hospital for Children where he also served as the medical director for the hospital's Suspected Child Abuse and Neglect program. This program collaborated with the Institute for Safe Families and Lutheran Settlement House to secure a Pennsylvania Children's Trust Fund grant which supported a community-based Intimate Partner Violence Screening program at St. Christopher's aimed at identifying at risk families and working to prevent child maltreatment. Additionally, while at St. Christopher's, Dr. Giardino collaborated with colleagues at the Drexel University School of Public Health to launch the Philadelphia Grow Project which provided clinical care to children with the diagnosis of Failure to Thrive and which also conducted policy research on the issues surrounding food insecurity and childhood hunger. Dr. Giardino is board certified in pediatrics, is a fellow of the American Academy of Pediatrics, and a member of both the Texas Pediatric Society, and the Harris County Medical Society. He is a member of the Helfer Society, the American College of Physician Executives, and the American College of Medical Quality. Dr. Giardino is a certified physician executive and is also certified in medical quality. Prior to relocating to Houston, Dr. Giardino served as chair of the Philadelphia Branch Board of the Southeastern Chapter of the American Red Cross, president of the board for Bethany Christian Services in Fort Washington, PA, and a two term member of the board for the Support Center for Child Advocates, where he was named a 2005 Champion for Children. His academic accomplishments include publishing articles and several textbooks on child abuse and neglect, contributing to several national curricula on the evaluation of child maltreatment, presenting on a variety of pediatric topics at both national and regional conferences, and, most recently, he completed a three-year term on the National Review Board (NRB) for the US Conference of Catholic Bishops, providing advice on how best to protect children from sexual abuse. While on the NRB, Dr. Giardino served as the chair for its Research Committee. Currently, Dr. Giardino serves on the national board of directors for Justice for Children (an advocacy organization providing assistance for children and families involved with the Court system around issues related to child abuse and neglect), the national advisory board for the Institute for Safe Families (an advocacy organization that seeks to train

professionals in screening and prevention around issues related to Intimate Partner Violence), and the national board of directors for Prevent Child Abuse America.

Eileen R. Giardino RN, PhD, FNP-BC, is an Associate Professor at the School of Nursing at the University of Texas Health Science Center (UTHSC) at Houston. Dr Giardino received her BSN and PhD from the University of Pennsylvania, her MSN from Widener University, and her NP certification in adult and family from LaSalle University. Clinically, Dr. Giardino works as a nurse practitioner at a university student health service. Her academic accomplishments include co-editing several text books in the areas of child maltreatment and intimate partner violence and she presents at professional meetings on issues related to physical assessment and conducting a differential diagnosis. Prior to moving to Houston, Dr. Giardino served on the board of directors for Bethany Christian Services in Fort Washington, PA, was on the advisory board for the LaSalle University Nursing Center in Philadelphia and completed two terms on the board of directors for the Philadelphia Children's Alliance where she also chaired the xxx committee. Finally, Dr. Giardino teaches on a variety of topics in the adult and family nurse practitioner tracks at UTHSC at Houston and is involved in supervising a number of clinical preceptorships within the nurse practitioner training program.

Rebecca G. Girardet, MD, was awarded a Bachelor's of Arts degree in Human Biology with honors from Stanford University in 1987 and her Doctorate of Medicine from the University of Arizona in 1992.

She completed her residency in pediatrics at Baylor College of Medicine in 1995. Dr. Girardet was in private practice and later worked as an instructor in the Baylor College of Medicine division of pediatric emergency medicine.

Dr. Girardet joined the division of community and general pediatrics at The University of Texas-Houston Medical School in 1998, where her work has focused on child maltreatment. She is a nationally recognized expert in child abuse.

Dr. Girardet has conducted several medical research projects, including clinical research funded by The Centers for Disease Control and Prevention. Dr. Girardet is Director of the UT-*C*hild *A*buse *R*esearch and *E*ducation Center, and she is the Medical Director of the Texas Forensic Assessment Center Network.

Her professional associations include: The American Academy of Pediatrics, the Pediatric Academic Societies, and the Ray Helfer Society. She is also a co-chair of the Child Abuse and Neglect Committee of the Texas Pediatric Society.

Dr. Girardet is fluent in English, French and Spanish. She is married and has 3 children.

Arne H. Graff, MD, was specialty trained in Family Medicine and subspecialty trained in Child Abuse Pediatrics, having completed the Pediatric fellowship at Hasbro Children's Hospital under the direction of Dr Carole Jenny and Dr. Christine Barron. I am currently the medical director for the Child and Adolescent Maltreatment Services Department with MeritCare Health Systems, in Fargo ND.

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As an Clinical Associate Professor of Pediatrics, for the University of North Dakota School of Medicine, he is involved in the teaching of medical students and residents. He is also on the APSAC board of directors.

Christopher S. Greeley, MD, was received his undergraduate degree from Hobart College in Geneva New York where he majored in Biology and Religious Studies. He received his medical degree from the University of Virginia in 1992 and complete internship and residency in pediatrics at Vanderbilt University. He spent three years in private pediatric practice in Franklin Tennessee before returning to Vanderbilt University in the Division of General Pediatrics in 1998. In 2007, Dr. Greeley moved to the University of Texas Health Sciences Center at Houston. He is board certified in pediatrics and is a member of the AMA and the AAP. He is a member of the AAP Section on Child Abuse and Neglect and Section on International Child Health.

Dr. Greeley was the 2006 Ray E Helfer Award winner. The Ray E Helfer Award is an annual award jointly presented by The American Academy of Pediatrics and The National Alliance of Children's Trust and Prevention Funds "to a distinguished pediatrician for his or her contribution to the prevention of child abuse and neglect."

Dr. Greeley currently is Vice Chair for Academic Affairs in the Department of Pediatrics at the University of Texas health Sciences Center at Houston. He is Associate Professor of Pediatrics in the Division of Community and General Pediatrics.

He is also on the national Board of Director for Prevent Child Abuse America. He is the Chair of the Prevent Child Abuse America's Committee on Research and was the chair of the ad hoc Committee on Healthy Families America.

Dr. Greeley has published on various areas of child abuse and is on the editorial board for The Quarterly Update, a prominent child abuse publication. He has written book chapters on Child Abuse Prevention as well as Mimics of Child Abuse. He is also a contributing editor for the AAP publication, Grand Rounds.

Pamela W. Hammel, DDS, DABFO, is a Board Certified Forensic Odontologist, and is the Forensic Dental Consultant to Children's Hospital of Michigan, Detroit, Michigan, and a consultant to the Macomb and Oakland County Medical Examiner's offices. She was also a consultant to Wayne County Medical Examiner's Office from 1985 to 2000, and is an advisor to the Medical Advisory Board to the state of Michigan's Family Independence Agency. She served on the Michigan State Board of Dentistry from 1992 to 2000, and has been Assistant Team Leader to the Michigan Forensic Dental Identification Team since its inception in 1985. She has participated in three aviation disasters, the World Trade Center Identification Unit in New York, 2001, and Hurricanes Katrina and Rita in New Orleans, 2005

Dr. Hammel also is a member of DMORT (Disaster Mortuary Operational Response Team) and NDMS (National Disaster Medical System.) She has served on the Board of Trustees to the American Society of Forensic Odontology (1991–1994), and the Board of Directors to the American Board of Forensic Odontology, 2001–2006. She was elected to Program Chair for the Odontology Section of the American Academy of Forensic Sciences 1998–2000, to Section Secretary 2000–2002, and to Section Chair 2002–2004.

Her publications include Journal of the Michigan Dental Association (cover story), "The Dentist's Role in Recognizing Domestic Violence", April/May 1995; Archives of Pediatric and Adolescent Medicine (cover story) "Human Bite Marks" April, 1996; New England Journal of Medicine "Human Bites versus Dog Bites", September, 2003. She was a member of the policy planning committee of the American Dental Association to explore "Does Dentistry Have a Role in the Event of a Bioterrorist Attack?" June, 2002.

Dr. Hammel is a Fellow of the American Academy of Forensic Sciences, a Fellow of American College of Dentists, a Fellow of the International College of Dentists, and a Fellow of the Pierre Fauchard Academy.

Nancy S. Harper, MD, is the Medical Director for the CARE (Child Abuse Resource & Evaluation) Team at Driscoll Children's Hospital in Corpus Christi, TX. She graduated from Dartmouth Medical School in 1995, and completed her pediatric residency in 1998 at Naval Medical Center Portsmouth in Virginia. After graduation, Dr. Harper served as a staff pediatrician and Child Abuse Consultant for Naval Medical Center Portsmouth, and then moved overseas to US Naval Hospital Okinawa in Japan where she continued as a Child Abuse Consultant and chair of the medical staff. In 2004, Dr. Harper resigned from the US Navy and entered into fellowship training in Forensic Pediatrics at Brown University in RI, graduating in January 2007. Dr. Harper serves as a consultant on the medical advisory committee for Superior Health Plan for foster care. Special interests include the proper use and interpretation of skeletal surveys and urine drug screens as well as drug-facilitated sexual assault.

Toi B. Harris, MD, received her undergraduate and graduate degrees from the University of Missouri-Kansas City. She completed her Psychiatry Residency and Child and Adolescent Psychiatry Fellowship at Baylor College of Medicine (BCM). Since 2005, Dr. Harris has been on the faculty at BCM and served as the director of the child psychiatry consultation and liaison service at Texas Children's Hospital.

She has received national awards from the American Psychiatric Association (APA) and the American Medical Association (AMA) and been an active member on committees such as the APA's National Committee of Family Violence and Sexual Abuse, APA's corresponding committee for poverty and homelessness, a board member of the All Healers Mental Health Alliance.

In addition to her academic interests and responsibilities, Dr. Harris is the community liaison of Missouri City Baptist Church's Total Person Ministry. This group provides community-based psychoeducational programs targeting the areas of grief, loss, trauma and gang-prevention.

Reena Isaac, MD, is a child abuse pediatrician with the Child Protection Section of the Emergency Center of Texas Children's Hospital in Houston, TX. She is an Assistant Professor of Pediatrics at Baylor College of Medicine. Dr. Isaac completed her pediatrics training at Jacobi Medical Center in New York City and a forensic pediatrics fellowship at Brown Medical Center in Providence, RI. At Texas Children's Hospital in Houston, Texas, she assists in the Child Protection medical

consultation service in identifying, evaluating, and diagnosing suspected child Maltreatment cases. She is also staff physician at the Children's Assessment Center's medical clinic. She has conducted numerous medical investigations involving suspected medical child abuse and has testified in both family and criminal court in such cases.

John F. Knutson, PhD, is a professor of psychology at the University of Iowa. He received his PhD in Clinical Psychology from Washington State University. After completing a post-doctoral fellowship in Medical Psychology at the University of Oregon Medical School, he joined the faculty at Iowa. He has held editorial positions at the Journal of Abnormal Psychology and the Journal of Clinical Psychology. He is a fellow of the American Psychological Association and the American Psychological Society. He has had more than 100 journal articles published and book chapters on aggression, physical child abuse, neglect, the association between abuse and disabilities, cochlear implants and methodology pertaining to the assessment of child maltreatment.

Penelope T. Louis, MD, is a pediatrician in Houston, Texas. She is part of the Academic Service at Texas Children's Hospital (TCH) and is board certified by the American Board of Pediatrics and a member of the American College of Emergency Physicians, the American Academy of Pediatrics and the Society of Critical Care Medicine. She is an Associate Professor Pediatrics in Academic General Medicine at Baylor College of Medicine (BCM) in Houston. Her specialties are pediatric critical care, pediatric emergency medicine, and physical medicine and rehabilitation. In addition to being in clinical practice, Dr. Louis' academic work includes co-authoring journal articles on pediatric care with a number of colleagues from BCM/TCH/

Michelle A. Lyn, MD, is an Associate Professor of Pediatrics at Baylor College of Medicine, Chief of Child Protection Section of Emergency Medicine at Texas Children's Hospital and serves as the Medical Director of The Children's Assessment Center. Dr. Lyn earned her M.D. degree from State University of New York at Buffalo School of Medicine, completed her residency in Pediatrics at Albert Einstein College of Medicine-Montefiore Medical Center in Bronx, New York, where she served as the Pediatric Chief Resident as well as completed a fellowship in Pediatric Emergency Medicine at Baylor College of Medicine in Houston, Texas. Her academic, clinical, research and community outreach work focuses largely on children in crisis. She teaches medical students, interns, residents and fellows of emergency medicine and family practice about child maltreatment and she educates community medical professionals, teachers, law enforcement officers, military personnel and first responders through SCAN (Suspect Child Abuse & Neglect) community outreach program. Dr. Lyn is a board certified pediatrician who is also certified in pediatric emergency medicine. She is a fellow of the American Academy of Pediatrics. Her community board memberships include St. Luke's Episcopal Health Charities and Healthy Family Initiatives, both in Houston Texas. She has presented numerous lectures, television, and radio appearances on topics of pediatric and adolescent

physical and sexual abuse. Dr. Lyn's work to help children in crisis and to teach medical professionals about the field of child maltreatment and pediatric emergency medicine has been recognized by her receiving Baylor College of Medicine's (BCM) Department of Pediatrics Award of General Excellence in Teaching as well as BCM's Fulbright and Jaworski Excellence Teaching award. Additionally, community recognition has manifested itself as the Texas Executive Women's Women on the Move honoree, Martin Luther King Foundation's Keeping the Dream Alive recipient and the Wesleyan College Alumni Recognition award. Prior to leading the Child Protection Team at Texas Children's Hospital, Dr. Lyn served as the Medical Director for the Pediatric Emergency Medicine at Ben Taub General Hospital in Houston which is dedicated to serving the under and uninsured population in Harris County Texas.

Maria D. McColgan, MD, is a board certified Pediatrician and the Director of the Child Protection Program at St. Christopher's Hospital for Children. After graduating from Temple University College of Medicine, Dr. McColgan completed her pediatric residency at St. Christopher's Hospital for Children in June 2003, where she then practiced as an Urgent Care Physician in the Emergency Department. Currently, in addition to her work as the Director of the Child Protection Program, Dr. McColgan is the site director for the Pediatric Clerkship at Drexel University. Dr. McColgan completed the Pennsylvania Chapter of the American Academy of Pediatrics Preceptorship in Child Abuse and the Michigan State University Primary Care Development Fellowship. Dr. McColgan developed a child abuse curriculum for pediatric residents, as well as a successful domestic violence screening project in the pediatric setting.

Donna Mendez, MD, is a board certified Pediatrician as well as Pediatric Emergency Medicine physician. She completed her pediatric residency at University of Texas Health Science Center in Houston, and a fellowship in Pediatric Emergency Medicine at University of Texas Southwestern. She is currently an attending at Baylor College of Medicine/Texas Children's Hospital Emergency Department and is a member of the Texas Children's Hospital Child Protection Team. Her research focus is on head injury. Dr. Mendez is currently investigating retinal hemorrhages in children suspected of having abusive head injury. Dr. Mendez is a co-investigator on two NIH studies looking at neuropsychological outcomes in children who have sustained head injury. Dr. Mendez is also involved in 3 research projects involving physical abuse in children, in which she is the principal investigator.

Vincent J. Palusci, MD, MS, graduated with honors in Chemistry from the University of Pennsylvania. He received his medical degree from the University of Medicine and Dentistry of New Jersey and completed his internship and residency in pediatrics at New York University/Bellevue Hospital Center in New York. He entered private practice and later joined the faculty of the College of Human Medicine at Michigan State University where he was also a TRECOS scholar and earned a M.S. in Epidemiology. He recently returned to NYU School of Medicine and Bellevue Hospital's Frances L. Loeb Child Protection and Development Center.

Dr. Palusci's work has focused on epidemiologic and health services issues for child abuse victims, and the educational needs of general and specialist pediatricians. He received the Ray E. Helfer Award for child abuse prevention in 2004. He has edited *Shaken Baby Syndrome: A Multidisciplinary Response* with Dr. Steven Lazoritz and *A Colour Atlas of Child Abuse and Neglect*, due out in 2009.

Thomas A. Roesler, MD, is associate professor of psychiatry and human behavior at Warren Alpert Medical School at Brown University and co-director of the Hasbro Children's Hospital Partial Hospital Program for children with both medical and emotional illness. He received his undergraduate degree in Philosophy from Whitman College and a medical degree from the University of Washington School of Medicine. He completed training in psychiatry and child psychiatry at the Hospital of the University of Pennsylvania and Philadelphia Child Guidance Clinic. His research interests include the psychological effects of childhood sexual abuse, medical child abuse, and the delivery of medical and psychiatric services in a collaborative day hospital environment. He recently published, along with his co-author, Carole Jenny, MD, MBA, a book entitled "Medical Child Abuse: Beyond Munchausen Syndrome by Proxy."

Albert J. Sargent, MD, is the Director of Child and Adolescent Psychiatry at Tufts Medical Center and Professor of Psychiatry and Pediatrics at Tufts University School of Medicine. Prior to assuming that position he was Professor of Psychiatry and Pediatrics at the Baylor College of Medicine and Director of Child and Adolescent Psychiatry at Ben Taub General Hospital in Houston, Texas. He also served as the Clinical Director of the System of Hope, a community system of care for seriously emotionally disturbed children in Houston. He is currently a member of the Massachusetts Children's Behavioral Health Advisory Council which is responsible for monitoring and improving children's behavioral health throughout the state. He has experience in all aspects of clinical child and adolescent psychiatry and special interest in developing clinical systems of care for poor and underserved children and adolescents with mental health problems. His other special interests include child and family responses to trauma and violence, eating disorders, adolescent suicide, family therapy and international child mental health program development. He has published over 70 articles and books on these topics. Dr. Sargent is a nationally known family therapist and has training and certification in general psychiatry, child and adolescent psychiatry and pediatrics. Dr. Sargent is also President of the American Family Therapy Academy. Before joining the Baylor College of Medicine faculty in 2001, Dr. Sargent had been Director of Education and Research at the Menninger Clinic in Topeka, Kansas and previously was Director of General and Child and Adolescent Psychiatry Training at the University of Pennsylvania in Philadelphia, Pennsylvania. He also has served as Deputy Director of the Eastern European Child Abuse and Child Mental Health Project and has extensive experience in training mental health professionals throughout the world.

Maria Scannapieco, PhD, MSW, is Professor at the School of Social Work, University of Texas at Arlington and Director of the Center for Child Welfare. She is the

Director of Certification for the Texas Protective Services Institute, which certifies all Texas Department of Family and Protective Services workers and supervisors across all for programs; child protective services, adult protective services, child care licensing, and statewide intake. The certification program covers more than 4,000 state employees.

Dr. Maria Scannapieco has worked in the public child welfare arena for over 25 years as an educator and researcher, with direct child protection and foster care administrative experience. She has received over a million dollars a year since 1996 from state and federal grants for training programs and research. She has extensive experience in grant development, implementation, management, and dissemination. As PI on a current Children's Bureau grant on curriculum development for CPS Supervisors on issues concerning youth aging out of foster care, Dr. Scannapieco has successfully managed the development, delivery, evaluation, and dissemination of a statewide training initiative.

Dr. Scannapieco has over 100 publications and presentations competitively selected many in the areas of child maltreatment, out-of-home placement, preparation for adult living programs, and training and retention of child welfare workers. She has been published in such professional journals as *Child Welfare, Social Service Review, Children and Youth Services Review*, and *Social Work*. Dr. Maria Scannapieco has two books with Oxford University Press, the first titled (with Rebecca L. Hegar) *Kinship Foster Care: Practice, Policy, & Research (1999)*, and another with *Understanding Child Maltreatment: An Ecological and Developmental Perspective (2005) (with Kelli Connell-Carrick).*

Carl J. Schmidt, MD, MPH, grew up in Latin America where he graduated from medical school at the Universidad Anahuac. After 2 years of general surgery training and 2 years of graduate school in neurobiology, he trained in pathology at the Medical College of Ohio in Toledo, Ohio, now the University of Toledo Medical Center. He did his fellowship in forensic pathology at the Wayne County Medical Examiner's Office in Detroit, where he became the Chief Medical Examiner in 2003. His main interests are pediatric trauma, forensic toxicology and the neurobiology of addiction. He is Clinical Assistant Professor in the Department of Pathology at the Wayne State University School of Medicine. He has participated in a program sponsored by the U.S. Department of Justice since 1998 that provides assistance for forensic issues in Latin America.

Philip V. Scribano, DO, MSCE, graduated from Rutgers University, and The University of Medicine and Dentistry of New Jersey–School of Osteopathic Medicine. He also received a Master of Science degree in Clinical Epidemiology at the University of Pennsylvania.

He is the Medical Director of the Center for Child and Family Advocacy at Nationwide Children's Hospital, Chief of the Division of Child and Family Advocacy, and Associate Professor of Pediatrics at The Ohio State University College of Medicine. He is the recipient of multiple research and program grants including awards from the Administration on Children and Families, Agency for Healthcare Research and Quality, and the Centers for Disease Control.

He is active with the American Academy of Pediatrics, and is chair of the Ohio AAP Committee on Child Abuse and Neglect. He is a board member of the Academy on Violence and Abuse, and co-chair of the Helfer Society's Fellowship Program Directors Committee.

Rohit Shenoi, MD, is an assistant professor of pediatrics at the Baylor College of Medicine, Houston and an attending physician in the emergency center at Texas Children's Hospital, Houston.

Dr Shenoi is also the coordinator of Houston Trauma Link, a coalition formed in 2000 to reduce the morbidity and mortality of childhood injuries in Houston/Harris County, Texas. The coalition comprises entities from the public and private health sectors, City and County Health Departments, Texas Department of Transportation, educational institutions, City Police, Fire and EMS, Houston Independent School District and the Regional Poison Control Center. The coalition integrates existing data sources to provide a local pediatric injury data system that supports injury prevention and control activities of the community.

Patricia M. Sullivan, PhD, is a licensed psychologist who obtained her Ph.D. degree in pediatric psychology from the University of Iowa. Dr. Sullivan is a Professor of Psychiatry and Psychology at Creighton University. She has extensive experience with children and families and has conducted several forensic evaluations for use in both district court and juvenile court proceedings. She has provided numerous presentations to guardians ad litem, county attorneys and to juvenile, county and district court judges on psychological evaluations. She is an NIH funded researcher and currently involved in the study of the long-term effects of violence exposure, including child abuse, domestic and community violence, in childhood.

Suzanna Tiapula, JD, is the Director of the National District Attorneys Association's National Center for Prosecution of Child Abuse. Ms. Tiapula manages the Center's outreach to 2,400 prosecutor's offices, approximately 37,000 prosecutors and thousands of allied child abuse professionals. Ms. Tiapula trains child abuse professionals across the country on a range of child maltreatment issues. In 2004/2005 Ms. Tiapula coordinated the development of two advanced trial advocacy courses for prosecution of online crimes against children (Unsafe Havens I and II) as part of NCPCA's Child Sexual Exploitation program. Ms. Tiapula has also developed materials and authored publications on a range of child maltreatment issues.

Ms. Tiapula began her legal career as a deputy prosecuting attorney for the City and County of Honolulu. As an Assistant Attorney General in American Samoa (1999–2001), Ms. Tiapula was responsible for all family violence, sexual assaults and institutional violence cases prosecuted in the territory. During this period, Ms. Tiapula worked with a criminal code that codified traditional Samoan practice. Ms. Tiapula is currently working with advocates and agency officials in American Samoa to establish a child abuse commission in Samoa and develop a regional network focusing on child protection in the south Pacific/Pacific Rim.

In addition to criminal prosecution, Ms. Tiapula has professional experience in the Pacific Rim working with diverse populations and legal systems. Early in her

professional career, Ms. Tiapula developed quantitative and qualitative evaluation techniques for program evaluation in immigrant/refugee communities in Hawaii. Ms. Tiapula also studied law at the National University of Singapore's Faculty of Law and worked for a corporate law firm in Bangkok, Thailand. Ms. Tiapula has taught for Hawaii Pacific University, Chaminade University, George Mason University and Pennsylvania State University. As Associate Director of the Rhetoric Program at P.S.U. in 2002 and 2003, she designed curriculum, taught honors courses for the Schreyers Honors College, evaluated pedagogy and mentored new instructors.

Jennifer J. Tscholl, MD, completed her undergraduate education at Bowling Green State University and medical education at the Medical College of Ohio (currently renamed University of Toledo College of Medicine). She completed her residency in Pediatrics at the Johns Hopkins Hospital in Baltimore, MD. She is currently amidst subspecialty fellowship training in Child Abuse Pediatrics at Nationwide Children's Hospital in Columbus, OH.

Dr. Tscholl is a member of the American Academy of Pediatrics and its associated Section on Child Abuse and Neglect. Her research interests include child physical abuse, with particular focus on abusive head trauma.

Part I

Child Abuse as a Health Problem

Chapter 1

Introduction: Child Abuse and Neglect

Angelo P. Giardino, Michelle A. Lyn, and Eileen R. Giardino

Definition

Child Abuse

Child abuse and neglect, *child maltreatment*, and *child victimization* are interchangeable terms that refer to a major public health problem confronting children and families. Abuse manifests when the child or adolescent's caregiver fails to provide for the youth's health and well-being either by causing an injury or, as in neglect, by not meeting a basic need. Because of the multifaceted nature of abuse, a comprehensive definition of child abuse and neglect draws upon information from a number of disciplines and a variety of professionals. The phenomenon of child maltreatment has diverse medical, developmental, psychosocial, and legal consequences. Child abuse and neglect, along with its synonyms, describes a wide range of situations. It involves caregiver acts of commission or omission that had or are likely to have injurious effects on the child's physical, developmental, and psychosocial well-being. Child maltreatment is broadly categorized into (a) physical abuse, (b) sexual abuse, (c) emotional/psychological abuse, and (d) neglect. Neglect is further subcategorized into specific areas, such as physical, supervisional, educational, and emotional/psychological (see Chapter 7).

Physicians and nurses commonly focus on definitions that highlight the medical aspects of injury, while clinical social workers tend to focus on family and caregiving systems that gave rise to abuse. Law enforcement officers and attorneys may concentrate on the evidence that determines guilt or innocence of the suspected perpetrator of the abuse. Definitions are purposely broad to encompass the many different etiologies, presentations, and clinical manifestations of abuse or neglect cases (Azar, 1991; Bourne, 1979; Helfer & Kempe,

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1987; Hobbs, Hanks, & Wynne, 1993; Ludwig, 1992; Wissow, 1990). Clinical situations may vary widely, ranging from the relatively rare case of a child who is tortured to death by a psychotic caregiver to the more commonly seen case of a toddler who sustains a bruise to his or her buttocks during the application of corporal punishment. The unifying theme in all definitions of child maltreatment is that abuse and neglect occur in the context of either active or passive caregiving behavior that is destructive to the normal growth, development, and well-being of the child (Ludwig, 1993).

Regardless of personal or professional preference for a specific definition, it is important that health care providers both (1) understand the definition of child abuse and (2) comply with the required actions contained in the state laws governing the geographical area in which they practice. In the United States, health care professionals such as nurses, physicians, and social workers are considered mandated reporters and are required to report suspected cases of child abuse and neglect to the appropriate authorities. According to the U.S. Department of Health and Human Services' Administration on Children and Families (2008b), the Federal Child Abuse Prevention and Treatment Act (CAPTA) which was amended by the Keeping Children and Families Safe Act of 2003 child abuse and neglect is defined as occurring at a minimum when

- 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 (Section 111, 2).

State and Federal laws on child abuse refer to cases of harm caused by caregivers, either parents or those in caregiving roles (DHHS, 2008a). Cases of harm to children and adolescents caused or perpetrated by non-caregivers are also seen as crimes (e.g., assault) but are not viewed as child maltreatment owing to the lack of a caregiving relationship between perpetrator and victim.

Physical Abuse and Neglect

Physical abuse occurs when a child has suffered injury due to the actions of his or her caregiver. *Neglect* describes inadequate parenting or caregiving where there is potential for injury resulting from omissions on the part of the caregivers in meeting the child's basic needs. Neglect is present when a child experiences poor hygiene, exposure to the elements, lack of compliance with medical therapy, inadequate supervision, and forms of malnutrition related to parental control over feeding (see Chapter 7).

Corporal Punishment

Corporal punishment is a discipline method that uses physical force or the threat thereof as a behavior modifier (Hobbs et al., 1993). Its use is widespread, is nearly universal, and has been practiced for generations (American Humane Association,

1994). It stems from cultural, religious, and societal views of how children should be disciplined. Forms of corporal punishment include pinching, spanking, shoving, shaking, choking, excessive exercise, confinement in closed spaces, and denial of bathroom privileges (Grossman, Rauh, & Rivara, 1995). In the United States, forms of corporal punishment such as slapping, spanking, paddling, and general hitting of children by adult caregivers are widely accepted (Hyman, 1990; American Academy of Pediatrics, 1998a; Zolotor, Theodore, Chang, Berkoff, & Runyan, 2008).

Proponents of corporal punishment claim that it is a valid approach to discipline that leads the family "to live in harmony and love toward each other" (Nelson, 1991, p. 17). However, in situations where the child's undesired behaviors are repeated after the application of corporal punishment, the caregiver may become angry and frustrated and reapply the punishment in this more emotionally charged state of mind. There is increased potential to lose control while angry and engage in violent behavior toward the child. "For the child's own good," well-meaning parents may apply physical forms of punishment which may get out hand and cause injury to the child. Such an action is defined by law as child abuse. The American Academy of Pediatrics' (AAP) Committee on Psychosocial Aspects of Child and Family Health (1998b) calls attention to the "limited effectiveness" of corporal punishment and its potential deleterious side effects. It recommends that pediatricians "use a comprehensive approach that includes consideration of the parent–child relationship, reinforcement of desired behaviors and the consequences for negative behaviors" (p. 723) when offering guidance to families on effective discipline.

Child discipline aims for limit setting, helping the child learn right from wrong, assisting in appropriate decision making, and assisting the child's development of self-control (Crittenden, 1992). Therefore, opponents of corporal punishment believe that discipline is necessary and best achieved through consistent, nonviolent discipline techniques such as time out, loss of privileges, parental disappointment, and grounding, which are not associated with significant potential for physical harm (American Humane Association, 1994; AAP, 1998a). There is little to support the effectiveness of corporal punishment over non-physical forms of discipline, and in fact, there are potential deleterious effects from promoting violence as a problem-solving strategy (Gershoff, 2008; McCormick, 1992).

Caregiver reliance on corporal punishment is long recognized as a significant risk factor for physical abuse (Berger, Knutson, Mehm, & Perkins, 1988; Straus, 1987). Punishment becomes child abuse when the correction causes bodily harm. Clinical findings such as hematomas, ecchymoses, fractures, muscle injury, intracranial bleeds, and death may result from punishment that becomes uncontrolled. When a child manifests signs of abuse, the health care provider is legally mandated to report the caregiver for physical abuse regardless of his or her initial intention (Straus, Gelles, & Steinmetz, 1980).

Despite negative outcomes, corporal punishment remains a socially acceptable form of punishment (Socolar & Stein, 1995). In a 1990 publication, 93% of college students studied reported being spanked at some time in their childhood, with 64% reporting the effects of spankings as being helpful to very helpful (Graziano & Namaste, 1990). In more recent work, Theodore and

colleagues summarize reported data that suggest at most a modest decline in the use of spanking or slapping as a form of corporal punishment. Data drawn from surveys in North and South Carolina found an overall use of spanking at 45%, with children between 3 and 10 years of age being spanked most frequently, and rates peaking at 80–90% for children between 3 and 5 years old (Theodore et al., 2005; Zolotor et al., 2008). A 2002 telephone survey determined the association between corporal punishment using spanking with an index of harsh physical punishment defined as behaviors that included beating, burning, kicking, hitting with an object somewhere other than the buttocks, or shaking a child less than 2 years old. Zolotor et al. (2008) found that parents who reported spanking with an object or who spanked frequently were more likely to report other harsh punishments consistent with definitions of physical abuse.

Hyman (1996) addressed the use of research to change policy regarding corporal punishment. He stated that corporal punishment persists despite a lack of evidence for its superiority or effectiveness in managing misbehavior. He called attention to "get tough" political rhetoric toward youth misbehavior and fear rooted in the public's perception of high crime rates as creating the social environment that maintains impassioned adherence to corporal punishment as a solution that distracts from the growing body of work that shows other, more positive forms of discipline as effective. Hyman asked the question, "what is the worst thing that would happen if all Americans stopped hitting children in any setting?" (p. 820). His response was that "most parents and teachers would discover what behavioral scientists already know. A combination of reward, positive motivational techniques, and appropriate, nonphysical punishments would prevent most misbehavior" (p. 820). Hyman further stated that ". . .in the next generation, rates of childhood aggression and child abuse would drop dramatically, since corporal punishment would not be considered a viable and automatic reaction to misbehavior" (Hyman, 1996, pp. 820–821). Hyman concluded with a call for continued informed dialogue and policy change stating: "Not a bad result for giving up something that has never been supported by the majority of those who study discipline in homes and schools. This is the message researchers and practitioners should actively convey to parents, policy makers and the media" (p. 821).

The AAP concludes its guidance on effective discipline with an equally reasoned and evidence-based approach to spanking:

> Because of the negative consequences of spanking and because it has been demonstrated to be no more effective than other approaches for managing undesired behavior in children, the American Academy of Pediatrics recommends that parents be encouraged and assisted in developing methods other than spanking in response to undesired behavior. (AAP, 1998b, p. 726)

Reporting

The health care professional uses clinical skills and judgment to decide if a child's injuries are due to abuse and/or neglect. They are mandated reporters of suspected child abuse and neglect and are obligated in all jurisdictions to comply with the law

(see Chapter 15). Clinical social workers are an excellent resource for helping health care professionals understand specific child abuse reporting laws and guidelines.

Scope of the Problem

Epidemiology

The incidence of child maltreatment (the number of new cases identified in a 1-year period of time) is often determined through research using data sources from reports of abuse and neglect. The data sources represent those cases known to social service or law enforcement agencies. The flaw in determining incidence by this method is that not all abuse is reported, and not all reports are considered to be actual abuse or neglect after investigation. Aggregation and comparisons among studies are problematic because reports often originate from reporting standards that vary. For example, a legal standard that holds up to rules of evidence governing an adversarial courtroom situation would likely yield different results than a social services' standard for abuse, which is less strict and allows the investigator's judgment as well as physical evidence to be used.

In 2006, approximately 3.3 million reports involving 6 million children were made to Child Protective Services (CPS) agencies (U.S. Department of Health and Human Services, 2008a). Of these, 61.7% were accepted as needing further investigation, and, once evaluated, the investigations concluded that child abuse and neglect had affected approximately 905,000 children, with 16% of this total representing cases of substantiated physical abuse (U.S. Department of Health and Human Services, 2008). A child abuse report is considered to be substantiated if investigation yields a determination that the child has been abused or is at significant risk of being abused or neglected. Substantiation implies a degree of certainty on the part of the child protective services (CPS) agency that the abuse occurred or that the child is at significant risk of such. The most common form of substantiated abuse in 2006 was child neglect, which accounted for 64.1% of cases, followed by physical abuse at 16%, then child sexual abuse at 8.8% of cases, and, finally, emotional maltreatment which accounted for 6.6% of cases (U.S. Department of Health and Human Services). See Figure 1.1.

Finkelhor and Jones (2008) analyzed trends in reporting and substantiation rates for child abuse and neglect from the 1990s through 2006. They identified a decline in the number of substantiated cases of physical abuse (Finkelhor & Jones, 2008). According to their most recent analysis, the incidence of substantiated physical abuse cases declined 48% from 1992 to 2006. Between 2005 and 2006, incidence declined by 3%. Cases of child sexual abuse have also declined substantially, with a 53% decrease in the number of substantiated cases of sexual abuse observed from 1992 to 2006. However, child neglect which is the most common form of child maltreatment has not declined. Substantiated cases of child neglect increased by 2% from 2005 to 2006. See Figure 1.2.

The Fourth National Incidence Study (NIS-4) is currently underway and is mandated by the US Congress in the Keeping Children and Families Safe Act of 2003

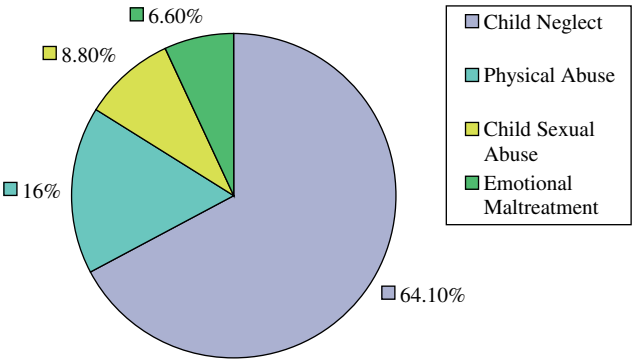

Figure 1.1 Most common forms of sustained abuse in 2006 (Child Maltreatment, 2006). Adapted from U.S. Department of Health and Human Services. Administration for Children and Families. Child Maltreatment 2006.

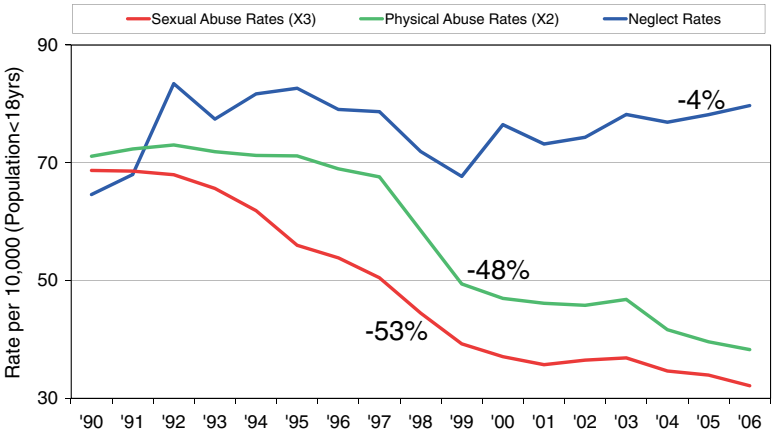

Figure 1.2 Child maltreatment trends.
Finkelhor and Jones (2008), used with permission.

(P.L. 108-36). Once completed, NIS-4 will provide the most up-to-date epidemiologic incidence data (U.S. Department of Health and Human Services, 2009). The NIS methodology views maltreated children who are investigated by CPS agencies as representing only the "tip of the iceberg." Children investigated by CPS are included along with maltreated children who are identified by professionals in a wide range of agencies in representative communities (see Figure 1.3). The NIS-4 uses data gathered from a nationally representative sample of 122 counties. CPS agencies in these counties provide data about all children in cases they accept for investigation during one of two reference periods (September 4, 2005

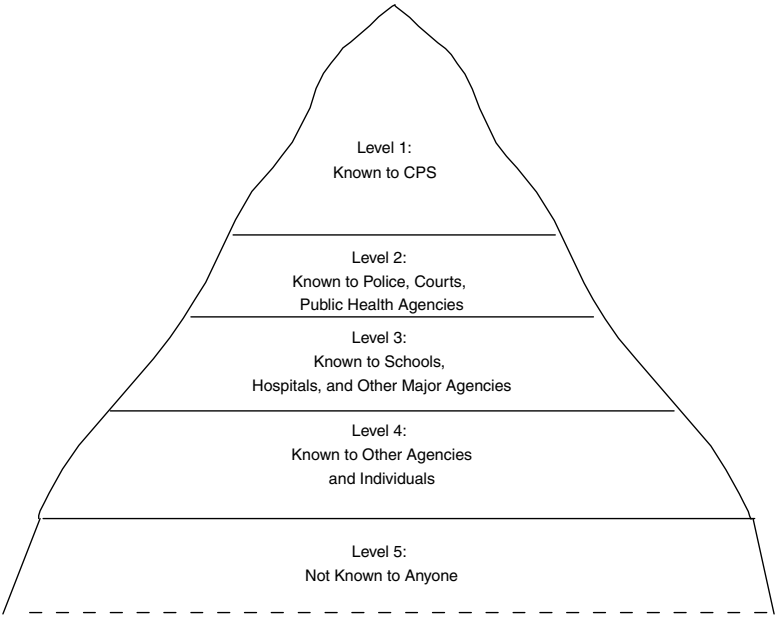

Figure 1.3 Levels of recognition of child abuse and neglect.
U.S. Department of Health and Human Services. Children's Bureau, Administration for Children, Youth and Families, Administration for Children and Families. (2001). A history of the National Incidence Study of Child Abuse and Neglect (p. 9). Accessed February 14, 2008, https://www.nis4.org/NIS_History.pdf.

through December 3, 2005, or February 4, 2006 through May 3, 2006). Additionally, professionals in these same counties serve as NIS-4 sentinels and report data about maltreated children identified by the following organizations: elementary and secondary public schools; public health departments; public housing authorities; short-stay general and children's hospitals; state, county, and municipal police/sheriff departments; licensed daycare centers; juvenile probation departments; voluntary social services and mental health agencies; shelters for runaway and homeless youth; and shelters for victims of domestic violence. The final report for the NIS-4 is expected to be available in 2010 at http://www.nis4.org/nishome.asp.

Fatal Child Abuse

According to the 1993 NIS-3 study, an estimated 1,500 children were known to have died as a result of maltreatment (Sedlak & Boradhurst, 1996). According to a report by Prevent Child Abuse America's National Center on Child Abuse Prevention Research, in 2006 an estimated 1,530 were known to have died as a result

of child maltreatment, which is an average of four children each day of the year (Child Welfare Information Gateway, 2008; National Center on Child Abuse Prevention Research, 2006). Children aged 0–3 years accounted for 78% of the child abuse and neglect fatalities, with infants younger than 1 year accounting for 44.2% of these maltreatment-related fatalities. Child abuse and neglect fatalities include those caused by neglect only 41.1% and medical neglect 1.9%. Multiple forms of maltreatment account for 31.4% of fatalities, physical abuse 22.4%, child sexual abuse 0.3%, and psychological abuse 2.9% which includes unknown other cases. See Figure 1.4. The estimated death rate for child abuse and neglect in the United States is 2.04 per 100,000 children.

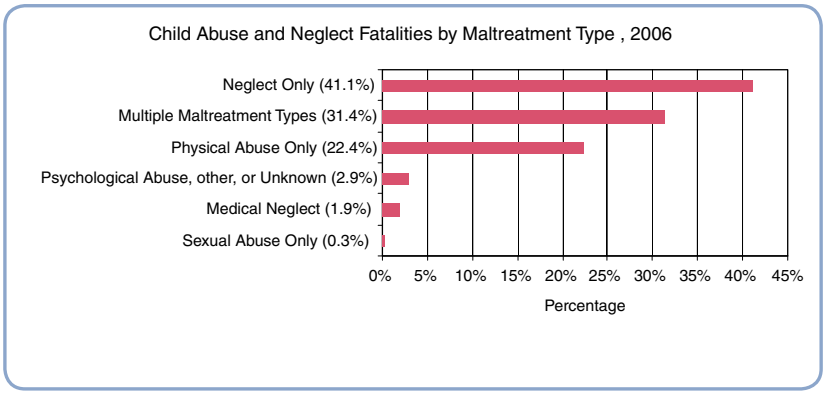

Figure 1.4 How do deaths occur?
U.S. Department of Health and Human Services. Child Welfare Information Gateway (2008).

Inflicted vs. Non-inflicted Injuries

Different forms of injury have different risks. For example, CNS injury in younger children is particularly serious. Bruises may be superficial or harbingers of more serious deeper injury. Burns observed in child maltreatment cases tend to be highly severe. Finally, skeletal injuries may be isolated or multiple in nature and may be associated with other injuries. DiScala, Sege, Guohua, and Reece (2000) conducted a 10-year retrospective of medical records in the National Pediatric Trauma Registry (NPTR) from 1988 to 1997 that compared hospitalized, injured children younger than 5 years to determine differences between inflicted ($n = 1{,}997$) and accidental injuries ($n = 16{,}831$) (DiScala et al., 2000).

The study compared children who had accidental injury with children who were abused and found that abused children tended to be younger (12.8 months vs. 25.5 months) and were mainly injured by battering (53%) and shaking (10.3%), and were more likely to have a preinjury medical history of a medical problem or condition.

Table 1.1 Outcomes by group, NPTR, 1988–1997[a].

	Unintentional injury, No. (%)	Child abuse, No. (%)
Total	16,831 (100)	1,997 (100)
Length of stay, d[b] Mean (SD) [median]	3.8 (8.0) [2.0]	9.3 (14.1) [5.0]
Survival[c]		
Alive	16,393 (97.4)	1,744 (87.3)
Dead	438 (2.6)	253 (12.7)
Functional limitations[c]		
0	11,295 (68.9)	1,063 (60.9)
1–3	4,388 (26.8)	418 (24.0)
4 or more	448 (2.7)	152 (8.7)
NA	261 (1.6)	111 (6.4)
Disposition[c]		
Home	15,761 (96.1)	624 (35.8)
Foster/custodial care/CPS	205 (1.2)	988 (56.6)
Other medical	348 (2.1)	101 (5.8)
Other	79 (0.5)	31 (1.8)

[a]NPTR, National Pediatric Trauma Registry; CPS, Child protective Services; NA, not applicable/not available.
[b]$P < 0.001$ by t test.
[c]$P < 0.001$ by χ^2 test.
Source: DiScala et al. (2000) (used with permission).

The unintentionally injured children were mainly injured by falls (58.4%) and motor vehicles (37.1%). See Table 1.1.

Etiology of Physical Abuse and Neglect

Models for Abuse

There is no single cause of physical abuse and neglect. Therefore, theoretical approaches and conceptual models help to organize the complex issues involved with child abuse and neglect. A jigsaw puzzle approach captures the multifactorial nature of child abuse and helps to explain causes (Hobbs et al., 1993). This approach incorporates diverse knowledge and understanding from a variety of sources including anthropology, child advocacy, criminology, education, history, law, medicine, political science, psychology, and sociology.

Early theories and models based on the existence of psycho-pathology in the parent (usually the mother) have evolved into more holistic cognitive and ecological models that try to account for factors involved in child maltreatment (Gil, 1975; Newberger & Newberger, 1981; Steele, 1987). At present, cognitive and ecological models are most accepted and focus more on what the abuser has learned and

experienced and how these forces may predispose him or her to function in a family context (Zuravin, 1989). Models describe the cause of abuse as multilevel and interactive involving the individual, the caregivers, the community, and the global sociocultural context (Gil, 1975; Newberger & Newberger, 1981).

The ecological approach is associated with the seminal work of psychologist Urie Bronfenbrenner (1977). It defines child development in the context of an interacting, dynamic system. The ecology for child development includes family (microsystem), the community in which the family exists, forces applied to the system (exosystem), and sociocultural values that overlay the community and its families (macrosystem) (Bronfenbrenner, 1977). Garbarino (1977) applied ecological principles to the study of abuse and neglect, thus introducing the interactional nature of the roles of the parent and child, family, social stress, and social and cultural values (Belsky, 1980; Justice, Calvert, & Justice, 1985). The human ecology or socioecological model is a useful paradigm from which to address the factors that place people at risk for a variety of forms of violence, including child abuse and neglect. See Figure 1.5.

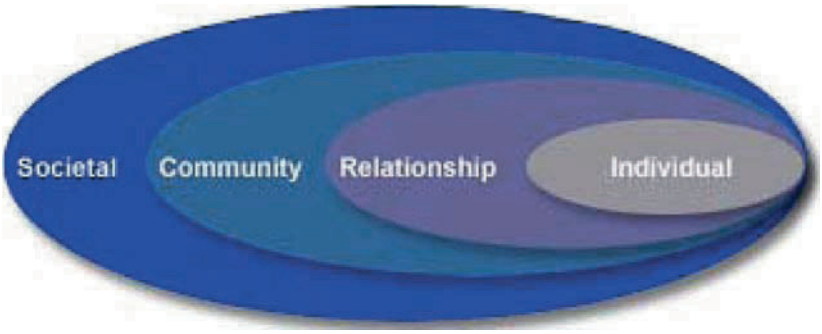

Figure 1.5 Ecological model for understanding violence.
Center for Disease Control (2009).
Note: This Socio-ecological Model considers the complex interplay between individual, relationship, community, and societal factors. It allows us to address the factors that put people at risk for experiencing or perpetrating violence.

Clinically Useful Approaches

Helfer (1973, 1987) provides a clinical and developmental perspective to the application of the ecological model to understanding child abuse and neglect. He states that the caregiver and child interact around an event or in an environment where the end result is that the child is injured or put at significant risk of injury or neglect. Helfer's (1987) approach accounts for the caregiver, the child, and triggers and stressors of the event or environment.

The Helfer (1973, 1987) model uses caution in defining the child's contribution to an abusive interaction. A child needs parenting, and nothing a child does, says, or thinks is reason to inflict injury on that child. However, personality or physical characteristics can be predisposing factors to child abuse or neglect. Characteristics of the child associated with risk for abuse or neglect include such conditions as

prematurity and disability (Breslau, Staruch, & Mortimer, 1982; White, Benedict, Wulff, & Kelly, 1987; Garbarino, Brookhouser, &, Authier, 1987). Proposed reasons why premature infants are at higher risk for abuse and neglect include decreased bonding between child and parent, medical fragility of the child, and stress associated with the level of medical care that prematurity requires (Sameroff & Abbe, 1978). Proposed reasons that physically and mentally challenged children are at increased risk center around the high demand that special needs place on the caregiver (Frisch & Rhodes, 1982). The health care provider can identify child factors that may place the child at risk for injury and provide to the caregiver ongoing anticipatory guidance related to these stressors.

The Child Abuse and Prevention, Adoption, and Family Services Act of 1988 commissioned the study of the incidence of child maltreatment among children with disabilities. This study provided data on the incidence of abuse among children with disabilities (U.S. Department of Health and Human Services, 1993):

- The incidence of maltreatment (number of children maltreated annually per 1,000 children) among children with disabilities was 1.7 times higher than the incidence of maltreatment for children without disabilities.
- For 47% of the maltreated children with disabilities, Child Protective Service (CPS) caseworkers reported that the disabilities led to or contributed to child maltreatment.
- CPS caseworkers reported that a disability led to or contributed to maltreatment for 67% of the maltreated children with a serious emotional disturbance, 76% of those with a physical health problem, and 59% of those who were hyperactive.
- The incidence of physical abuse among maltreated children with disabilities was 9 per 1,000, a rate 2.1 times the rate for maltreated children without disabilities.
- Among maltreated children with disabilities, the incidence of physical neglect was 12 per 1,000, a rate 1.6 times the rate for maltreated children without disabilities.
- The incidence of emotional neglect among maltreated children with disabilities was 2.8 times as great as for maltreated children without disabilities.

Sullivan and Knutson (1998) designed a more rigorous study that used medical–professional determinations of disability.

This hospital-based epidemiological study provided further evidence that a disability rate among maltreated children was approximately twice the disability rate among non-maltreated children. Sullivan and Knutson (2000) later studied a school-based population and reported that children with disabilities were 3.4 times more likely to be maltreated than their nondisabled peers. Additionally, these researchers showed that while the risk for physical abuse among children with a physical disability was approximately 1.2 times that of nondisabled children, the risk for physical abuse among children with other disabilities ranged from 2 to 7.3 times that of nondisabled children (Sullivan & Knuston, 1998, 2000; Westat, 1993).

Among the 905,000 victims of substantiated child maltreatment in 2006, 7.7% had a reported disability. Specific disabilities included global cognitive problems, emotional disturbances, visual or hearing difficulties, a variety of learning