Strategies to Prevent Child Maltreatment and Integration Into Practice

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Introduction

Preventing child abuse and neglect spares children physical and psychological pain and improves their long-term health outcomes. Dubowitz (2002) noted that prevention "is intuitively and morally preferable to intervening after the fact." Therefore, the potential for harm to adults from child maltreatment calls us to action. Early intervention may be more effective in preventing abuse and neglect, may save money for society, and may improve peoples' overall health and well-being, perhaps the most important goals a society can accomplish.

There is increasing evidence to demonstrate the elements of successful interventions, the populations and programs of most benefit, and the best implementation research to demonstrate that we have met our goals. This article reviews current strategies in child abuse prevention and guides professionals in the integration of prevention activities into their daily work.

The Case for Prevention

Recent research has identified the physical and mental conditions increasingly being associated with adverse childhood experiences, such as physical abuse, sexual abuse, and neglect. Neurologic imaging and traumatology studies have delineated the chronic physiologic and structural changes that occur after chronic stress and abuse (De Bellis, 2005; Eluvathingal et al., 2006). Chronic stress and abuse are also associated with specific disease processes and poor mental health outcomes in adults. These adverse childhood experiences (ACES) have been associated with increased rates of teen pregnancy, promiscuity, depression, hallucinations, substance abuse, liver disease, chronic obstructive pulmonary disease, coronary artery disease, and identifiable permanent changes in brain structure and stress hormone function (Anda et al., 2002; Dube, Anda, Felitti, Chapman, & Giles, 2003; Felitti et al., 1998; Middlebrooks & Audage, 2008). Although treatment after the fact can improve mental and physical health and prolong life and productivity, the direct and indirect costs of child maltreatment for both children and adults in lost health, pain, and suffering themselves warrant our taking action to prevent child abuse and neglect.

There is increasing evidence supporting the effectiveness of several universal and selective prevention interventions (Mikton & Butchart, 2009). However, a comprehensive assessment of prevention strategies should also include an analysis of cost and of potential financial benefit (Plotnick & Deppman, 1999). Robert Caldwell (1992) estimated that the costs of a home visitor program in Michigan would be 3.5% of the \$823 million estimated cost of child abuse, and small reductions in the rate of child maltreatment were thought to make prevention cost-effective. Also in Michigan in 2002, the estimated yearly loss of tax revenue and productivity due to child maltreatment rose to \$1.8 billion (Noor & Caldwell, 2005).

The National Research Council (1993) and others studied clinical conditions associated with abuse and neglect, including depression, posttraumatic stress disorder, and conduct disorders, all of which compound any direct physical injuries inflicted on individual children. Associated trauma and increased risk of low academic achievement, drug use, teen pregnancy, juvenile delinquency, and adult criminology were also noted. Deborah Daro (1988) estimated a national and direct juvenile delinquency cost of \$14.9 million based on incidence and the delinquency rate among adolescent victims. She concluded that 1% of severely abused children suffer permanent disability. Daro's cost analysis projected that the national cost and future productivity loss of severely abused and neglected children is between \$658 million and \$1.3 billion each year, as of 1988, assuming that their impairments would reduce their future earnings by as little as from 5% to 10%.

However, drawing from Maxfield and Widom's work (1996), Fight Crime: Invest in Kids (Alexander, Baca, Fox, Frantz, Huffman et al., 2003) noted that child abuse and neglect costs Americans at least \$80 billion annually and affects taxpayers as well as those being directly affected. Prevent Child Abuse America (Wang & Holton, 2008) used "conservative" estimates to calculate direct and indirect costs as \$103.8 billion in 2007. Potential benefits of prevention include mitigating the direct costs of child maltreatment as well as improving all of our lives through increased productivity and decreased crime and need for social services (Alexander et al., 2003).

Definitions

Child maltreatment prevention is endorsed by all those who are familiar with the problems associated with child maltreatment, and efforts aimed at preventing abuse are promoted by agencies, governmental officials, and individual practitioners.

Unfortunately, beyond a blanket endorsement of the concept, there are many different ideas about what prevention actually means and what activities are considered effective. Definitions vary, yet three categories of prevention are generally described:

- 1. Primary: Efforts aimed at the general population for the purpose of keeping abuse from happening.
- 2. Secondary: Efforts aimed at a particular group with increased risk to keep abuse from happening.
- 3. Tertiary: Efforts aimed at preventing abuse from happening again to those who have already been victimized. This level of prevention may include treatment for the original abuse.

The Centers for Disease Control and Prevention (CDC, 2007) have emphasized that abuse operates in a societal context and requires an entire spectrum of necessary prevention strategies over time, thinking of prevention in terms of WHEN does it occur (before or after abuse), WHO is the focus of prevention (everyone, those at greatest risk, and those who have already experienced abuse), and WHAT is the level of influence and points for intervention (individual, relationship, community, society). These efforts are based on Bronfenbrenner's ecological model, which promotes intervening at the individual, relationship,

community, and societal levels (Bronfenbrenner, 1977; Zielinski & Bradshaw, 2006). Approaches implied from these new labels emphasize a shift away from risk reduction as the predominant prevention approach and toward promotion of positive social change. Some argue that prior definitions limited prevention strategies by focusing primarily on potential individual targets of abuse and how to intervene, rather than the environmental and societal context that supports and even condones abusive acts.

Definitions of prevention based on timing can also be considered:

- 1. Primary: This is taking action *before* abuse has occurred to prevent it from happening.
- 2. Secondary: This level of prevention is intervening *right after* abuse has occurred.

3. Tertiary: Tertiary prevention is seen as that which takes the long view and works *over time to change conditions* in the environment that promote or support abusiveness.

Physicians and other medical professionals have been invited to become more active in prevention as part of this definitional shift. For example, the National Sexual Violence Resource Center (2006) has recently published information about how to involve a broader constituency in prevention through using the "Spectrum of Prevention." Prevention is explicitly not the responsibility of any one agency, profession, or program but is framed as the responsibility of all to create a society less conducive to child maltreatment. In this paradigm, individual skill development, community and provider education, coalition building, organizational change, and policy innovations are all part of the prevention solution.



Successful and Promising Child Maltreatment Prevention Strategies

Although several strategies are reported to prevent child maltreatment, the effectiveness of most programs is still not known (MacMillan, Watlen, Fergesson, Leventhal, & Taussig, 2009). Home visiting programs are not uniformly effective; parenting programs appear to improve parenting but not necessarily reduce child maltreatment; some family programs are successful in reducing physical abuse but not neglect; and sexual abuse educational programs have created controversy despite some promising results. One suggested strategy is to tailor programs to one or more levels of intervention.

given our understanding that child maltreatment occurs because of many factors simultaneously on the parental, child, family/relationship, community, and societal levels (World Health Organization & the International Society to Prevent Child Abuse and Neglect, 2006). We will now review successful and promising prevention strategies to assist professionals in sorting through myriad intervention models and potential outcomes.

Home Visiting Home visiting programs aim to prevent child abuse and neglect by influencing parenting factors linked to maltreatment: (1) inadequate knowledge of child development, (2) belief in abusive parenting, (3) empathy, (4) sensitive, responsive parenting, (5) parent stress and social support, and (6) the ability to provide a safe and stimulating home environment. By changing these factors, home visiting programs also seek to

improve child development and health outcomes associated with abuse and neglect. They have noted reductions of 40% of child maltreatment in certain models (Sweet & Appelbaum, 2004; Olds, 2006; Gomby, 2007). In a comprehensive review, Gomby (2005) examined the findings from 12 recent meta-analyses and other studies that used rigorous research methods, including randomized trials and quasiexperimental designs. Home visitation programs were most effective when they targeted families with many risk factors and used highly trained professionals who carefully followed a research-based model of intervention. Long-term follow-up with low-income single mothers who received home visitation services suggested that these programs

are also effective in reducing child abuse and neglect in families where domestic violence is *not* present, decreasing the number of subsequent pregnancies, arrest rates, and the amount of time on welfare (Olds, Eckenrode, Henderson, Kitzman, Powers, & Cole, 1997; Eckenrode et al., 2000). Home visiting by nurses has been consistently effective at reducing preterm and low-weight births, increasing well child care medical visits and reducing deaths and hospitalizations for injuries and ingestions (Olds, Henderson, Tatelbaum, & Chamberlin, 1986; Schuster, Wood, Duan, Mazel, Sherbourne, & Halfon, 1998; Barlow, Davis, McIntosh, Jarret, Mockford, & Stewart-Brown, 2007; Caldera, Burrell, Rodriguez, Crowne, Rohde, & Duggan, 2007; Olds et al., 2002; King et al., 2001; Donovan et al., 2007; MacMillan, Thomas, Walsh, Boyle, Shannon, & Gafni, 2005). The findings have been replicated in a population of medically at-risk infants, where home visiting using paraprofessionals was associated with lower use of corporal punishment, greater safety maintenance in the home, and fewer reported child injuries (Bugental & Schwartz, 2009).

Some programs such as Healthy Families America (HFA) have used paraprofessionals to provide services (Duggan et al., 2004). In a more recent randomized trial of HFA in New York, mothers in the program committed only one-quarter as many acts of serious abuse and neglect as did control mothers in the first 2 years (Dumont et al., 2008). An evaluation of Healthy Families Florida found that the program using paraprofessionals has had a positive impact on preventing child maltreatment, showing that children in families who completed treatment or had long-term, intensive intervention experienced significantly less child maltreatment than did comparison groups who had received little or no service. This effect was accomplished in spite of the fact that, in general, participants were at significantly higher risk for child maltreatment than the overall population. According to Williams, Stern & Associates



(2005), Healthy Families Florida participants had 20% less child maltreatment than all families in their target service areas. In addition, families who completed the program fared much better than their comparison group counterparts and were more likely to read to their children at early ages. Also, Healthy Families positively affected selfsufficiency, defined as employment. The program met or exceeded its goals for preventing maltreatment after program completion, provision of immunizations and well-baby checkups, increasing time between pregnancies, and participant satisfaction with services (Williams, Stern & Associates, 2005).

The Nurse-Family Partnership (NFP) is an evidence-based nurse home visitation

program that improves the health, well-being, and self-sufficiency of low-income, first-time parents and their children. NFP models have been evaluated longitudinally across three sites using randomized trials (Olds, 2006) and have been replicated in 250 counties. One analysis showed that for every \$1 spent on the NFP, there were \$4 in savings for taxpayers (Alexander et al., 2003). Other specific programs have been reviewed, but overall, it is difficult to show improvements in key outcomes such as child abuse and neglect (Rigney & Brown, 2009). Perhaps results aren't forthcoming because the programs have wide variability in the job description of the home visitor, program implementation, and costs, which makes comparison difficult.

Family Wellness Programs Family wellness programs, including a variety of parent and family interventions, have been demonstrated to have some positive effects. These programs range from short-term counseling to parenting classes, sometimes with home visiting and sometimes with intensive "wrap-around" services for families at high risk for maltreatment. Many of these have been grouped together, making assessment problematic, but early meta-analyses show promising reductions in child maltreatment (MacLeod & Nelson, 2000). Intensive family preservation programs with high levels of participant involvement, an empowerment/strengths-based approach, and social support were more effective. In one study, programs designed to meet families' basic concrete needs and to provide mentoring were more effective than parenting and child development programming, and center-based services were more effective than home-based ones (Chaffin, Bonner, & Hill, 2001). In one series of 1,601 inner-city clients with moderate risk, programs that helped families meet basic needs and provided mentoring were found to be more effective than parenting or child development programming (Chaffin et al., 2001). At-risk

"Triple P" system was designed as a comprehensive, population-

level system of parent and family support with five intervention

parents who do not receive parent coaching or education have higher rates of child maltreatment, parent arrest, and child hospitalization for violence (Alexander et al., 2003).

Family-Based Parenting Interventions Parenting programs, delivered by health visitors, have been found to improve child mental health and behavior, and reduce social dysfunction among parents in one randomized controlled trial (Patterson, Barlow, Mockford, Klimes, Pyper, & Stewart-Brown, 2002). A metaanalysis of parent training, a subset of parent interventions, has concluded that training can change childrearing strategies as well as modify parents' attitudes and perceptions (Lundahl & Harris, 2006). However, parent training models often differ, which precludes direct comparisons. Parent training can include reviewing child development, teaching and practicing specific skills, identifying and addressing maladaptive behaviors, and supporting parents in managing their own emotions and responding to stress. Effect sizes overall were thought to be moderate, with outcomes affected by how training was delivered and under what conditions. Finally, family socioeconomic status, relationship with the trainer, inclusion of fathers, the need for additional child therapy, inclusion of a home visitor, proper length, delivery mode, and delivery setting must also be addressed to maximize potential outcomes.

A more recent CDC meta-analysis of parent training programs (2009) looked at program components and delivery methods that had the greatest effect on child behavior and parent skills. It concluded that teaching parents emotional communication skills and positive child interaction skills, while requiring practice with their children during each session, was the most effective in helping them to acquire effective parenting skills and behaviors. Teaching parents about the correct use of time out, to respond consistently to their child, to interact positively with their child,

and to require practice were all associated with decreases in children's externalizing behaviors (CDC, 2009).

In another model, Palusci, Crum, Bliss, and Bavolek (2008) found that parents with a variety of problems, including incarceration, substance abuse, and stress, had improved empathy, understanding of child development, and other skills after an 8-week program of interactive classes using a family nurturing program. The levels of increasing intensity and narrowing population reach. The system combines various targeted interventions to ensure a safe environment, including promoting learning, using assertive discipline, maintaining reasonable expectations, and taking care of oneself as a parent. These principles then translate into 35 specific strategies and parenting skills. A recent large-scale randomized trial of the system noted lesser increases in substantiated child maltreatment, child out-of-home placements, and child maltreatment injuries in the intervention counties (Prinz, Sanders, Shapiro, Whitaker, & Lutzker, 2009).

Health-Based Services Health services during the prenatal period and early shill be add have generally not been above universally to

and early childhood have generally not been shown universally to result in reduced child abuse and neglect, but a recent randomized trial in an inner-city clinic with high-risk families was able to show lower rates of maltreatment, CPS reports, harsh punishment, and improved health services after an intervention of pediatric resident education in a primary care medical setting (Dubowitz, Feigelman, Lane, & Kim, 2009). It is often not possible during the prenatal and immediate postnatal periods to reliably identify families who will go on to maltreat their children, suggesting that anticipatory guidance for all families offers a better chance of reducing child maltreatment and violence (Brayden et al., 1993; Peters & Barlow, 2004). There are several barriers (time, training, culture, sensitive issues) to widespread implementation that can be addressed by identifying potential strategies, such as the use of handouts and local news stories, to begin a dialogue during routine pediatric visits (Sege, Hatmaker-Flanigan, De Vos, Lenn-Goodman, & Spivak, 2006). There remain several high-risk groups that will need special, focused attention by the health care system. Addicted mothers, for example, need access to drug and alcohol treatment programs that can prevent neurologic damage to fetuses (such as

fetal alcohol syndrome), and neurologic damage at birth interacts with deficient parenting to multiply the risk of criminality and maltreatment (Alexander et al., 2003). Mental health services need to be available for depressed or mentally ill parents who have greatly increased risk for physically abusing or killing their children (McCurdy & Daro, 1994).

Community Strategies A large body of theory and empirical research suggests

that intervention at the neighborhood level is likely to prevent child maltreatment within families. This represents a "fourth wave" in prevention activities, with emphasis on altering communities on par with those aimed at the individual parenting level (Daro & Dodge, 2009). The two components of intervention that appear to be most promising are social capital development and community coordination of individualized services. Social disorganization theory suggests that child abuse can be reduced by building social capital within communitiesby creating an environment of mutual reciprocity in which residents are collectively engaged in supporting each other and in protecting children. Research regarding the capacity and quality of service delivery systems in communities with high rates of maltreatment underscores the importance of strengthening a community's service infrastructure by expanding capacity, improving coordination, and streamlining service delivery (Daro & Dodge, 2009). Community strategies to prevent child abuse and promote child protection have focused on creating supportive residential communities whose residents share a belief in collective responsibility to protect children from harm, and on expanding the range of services and instrumental supports directly available to parents. Both elements—individual responsibility and a strong formal service infrastructure—are important. The challenge, however, is to develop a community strategy that strikes the appropriate balance between individual responsibility and public investment.

Daro and Dodge (2009) have also noted that, in the short run, the case for community prevention is promising on both theoretical and empirical grounds. Community prevention efforts are well grounded in a strong theory of change and, in some cases, have strong outcomes. At least some of the models have reduced reported rates of child abuse and injury to young children, altered parent-child interactions at the community level, and reduced parental stress and improved parental efficacy. When focusing on community building, the models can mobilize volunteers and engage diverse sectors within the community such as first responders, the faith community, local businesses, and civic groups in preventing child abuse. This mobilization can exert synergistic impact on other desired community outcomes, such as economic development and better health care.

Societal Policies Factors in society that can contribute to child maltreatment include the social, economic, health and education policies that lead to poor living standards, socioeconomic instability, or hardship as well as social or cultural norms that promote or glorify violence, demand rigid gender roles, or diminish the status of the child with regard to the parent (WHO, 2006). On the global scale, the United Nations Convention on the Rights of the Child offers a framework as a legal instrument for integrating the principles of children's rights with professional ethics and for the policy changes needed to enhance public health responses to prevent maltreatment (Reading et al., 2009). Each of

these rights has specific implications for practice, advocacy, and research that can assist in defining, measuring, legislating, monitoring, and preventing child maltreatment. Achieving appropriate investments in community child abuse prevention programs will require a research and policy agenda that recognizes the importance of linking learning with practice. It is not enough for scholars and program evaluators to learn how maltreatment develops and what interventions are effective, and for practitioners, separately, to implement innovative interventions in their work. Instead, initiatives must be implemented and assessed in a manner that maximizes both the ability of researchers to determine the effort's efficacy and the ability of program managers and policy makers to draw on these data to shape their practice and policy decisions, which can affect society as well as families and communities (WHO, 2006; Daro & Dodge, 2009).

Elements of Effective Approaches

The Prenatal and Perinatal Periods Ray Helfer (1987) noted the "window of opportunity" that is present in the perinatal period to enhance parent-child interactions and prevent physical abuse. This period, which he defined as from one year before birth to 18-24 months of life, was determined to be a critical time to teach new parents skills of interaction with their newborns. Several program models have shown promise based upon key periods within this time frame, including prepregnancy planning, early conception, late pregnancy, prelabor and labor, immediately following delivery, and at home with the child. Opportunities for prevention in the early months of life include teaching parents and caregivers to cope with infant crying and how to provide a safe sleep environment for their infant. A recent meta-analysis of several early childhood interventions concluded that the evidence for their preventing child maltreatment in the first year of life is weak, but longer-term studies may show reductions in child maltreatment similar to other programs such as home visiting, when longer follow-up can be achieved (Reynolds, Mathieson, & Topitzes, 2009).

Public Health Approach The public health model follows a common pattern of intervention and evaluation when addressing a variety of conditions. The problem is defined, risk and protective factors are identified, prevention strategies are developed and tested, and if successful, they are widely adopted (CDC, 2009). A key operating assumption in such efforts is that change initiated in one sector will also have measurable spillover effects into other sectors and that the individuals who receive information or direct assistance will change in ways that begin to alter normative behavioral assumptions across the population. This gradual and evolutionary view of change is reflected in many public health initiatives that, over time, have produced dramatic improvement in such areas as smoking cessation, reduction in drunk driving, increased use of seat belts, and increased conservation efforts. CDC and the Maternal Child Health Bureau, for example, have

strengthened the public health role and funding for child maltreatment and violence prevention (Children's Safety Network, 2007; CDC, 2007). A caution is that the public health model of reducing adverse outcomes through normative change may not be directly applicable to the problem of child maltreatment. In contrast to the "stop smoking," "don't drink and drive," and "use seat-belts" campaigns, child abuse prevention often lacks specific behavioral directions that the general public can embrace and feel

empowered to impose on others in their community. Exceptions may exist for specific forms of maltreatment, such as shaken baby syndrome, but much maltreatment is neglect, which is less amenable to identification and public health intervention (Schnitzer, Covington, Wirtz, Verhoek-Oftedahl, & Palusci, 2008). In these situations, the public health approach can still affect child maltreatment by applying what we know about various types of abuse to create more effective social action for prevention.

Evidence-Based Programs

Although evaluating child maltreatment prevention programs has been discussed for some time (Helfer, 1982), it is only recently that the practice field has begun to develop the

necessary capacity to understand and use evidence in decision making. National organizations—such as the U.S. Centers for Disease Control and Prevention, Prevent Child Abuse America, Parents Anonymous, and the National Alliance of Children's Trust and Prevention Funds—have begun to assess and disseminate information about the effectiveness of programs (Prevent Child Abuse America, 2008). The World Health Organization (2006) has also assembled a guide to assist policy makers and program planners in using and developing evidencebased programs. The CDC has promoted evidence in the creation and implementation of family programs, for example, which integrate evidence and evaluation into the program model. Programs should ideally monitor their impact, create and enhance new approaches to prevention based on those results, apply and adapt effective practices, and build community readiness for additional activities (CDC, 2008).

Targeting Specific Types of Child Maltreatment Several parent education programs have been evaluated for their association with decreases in physical abuse and neglect. Family Connections, a

multifaceted, home visiting community-based child neglect prevention program, showed "cost effective" improvements in risk and protective factors and behavioral outcomes (DePanfilis, Dubowitz, & Kunz, 2008). To address a specific form of physical abuse, Mark Dias and colleagues devised a hospital-based parent education program implemented immediately after birth that has been shown to decrease the incidence of shaken baby syndrome (Dias, Smith, deGuehery, Mazur, Li, & Shaffer, 2005). After a

similar program delivered to over 15,000 new parents in West Michigan, the number of SBS cases admitted to the hospital dropped from 7 per year to 5.3, a 24% reduction (Palusci, Zeemering, Bliss, Combs, & Stoiko, 2006).

Barr and colleagues (2009) have devised a program of parent education in late pregnancy, delivery, and early infancy phases to change maternal knowledge and behaviors relevant to infant shaking (Barr et al., 2009). Using a randomized controlled trial, they were able to demonstrate how "The Period of Purple Crying" was able to increase maternal knowledge scores, knowledge about the dangers of shaking, and sharing that information with other caretakers. No significant differences were noted in maternal behavioral responses to crying.



Two risk factors, poverty and substance abuse, have been singled out as particularly important in terms of the strength of their association with physical abuse and neglect (Ondersma & Chase, 2003). Ondersma and Chase review the pathways in which substance abuse potentiates the effects of poverty and increases the risk of neglect, and they suggest a number of ways professionals can reduce substance abuse and maltreatment. Increased recognition and integration of substance abuse treatment in child welfare is a first step. A motivationally based public health approach for potentially at-risk parents would be proactive, brief, and repetitive and would incorporate substance abuse prevention messages into routine public health approaches spread over the parenting years. There is growing evidence that such programs, when implemented in multiple settings without stigmatizing parents, can appreciably reduce substance abuse and its associated maltreatment (Ondersma & Chase, 2003).

The biggest questions of how best to prevent sexual abuse, how to reduce rates over time, and eventually, eliminate sexual abuse remain unanswered. There are numerous signs that prior efforts

have been useful, but new methods need to be further explored and researched. In tests that show learning and skill acquisition for children and adults as a result of policy change, education, or media campaigns, study after study shows benefits of past prevention efforts (Davis & Gidycz, 2000; Rispens, Aleman, & Goudena, 1997). However, until recently, no study actually showed that participation in a prevention program resulted in reduced rates of sexual abuse for participants, with only anecdotal reports on successes and actions taken to stay safe as evidence (Plummer, 2001). A recent study, however, showed that college women (n=825) who had participated in a child sexual abuse prevention program as children were significantly less likely to experience subsequent sexual abuse than those who had not had such a program (Gibson & Leitenberg, 2000). Additionally, although some argue that sexual abuse has not decreased as a result of sexual abuse prevention efforts (Bolen, 2003), actual rates of sexual abuse do seem to be decreasing, and one proposed explanation is that sexual abuse prevention efforts may be at least part of the reason (Finkelhor & Jones, 2004). Finkelhor (2007) has concluded that these decreased rates and other available evidence support providing high-quality sexual abuse prevention education programs because children are able to acquire the concepts, the programs promote disclosure, there are lower rates of victimization, and children have less self-blame after attending these programs. There is additional evidence that movements to build adult and community responsibility for child sexual abuse prevention, such as the "STOP It Now" program, are also an important component.

Despite the prevalence and demonstrated long-term effects of psychological maltreatment, there is little evidence detailing specific programs and practices designed specifically for its primary prevention. Several interventions for prevention of physical abuse and neglect do promote attachment and enhanced parent-child interactions, which by their very nature should decrease psychological maltreatment. However, given the varying definitions of psychological maltreatment from study to study and our difficulty in its accurate identification and reporting, it will be inherently problematic to show its reduction after prevention activities.

Integrating Prevention Into Professional Practice

Professionals have several potential roles in violence prevention, including advocating for resources for effective programs, screening, recognizing and referring at-risk families for services, and promoting nurturing parenting and child-raising styles (AAP, 1999). Johnson (1998), Dubowitz (2002), and Plummer and Palusci (in press) have suggested several opportunities for professionals to take a leadership role in preventing child maltreatment:

Parent Education Professionals need to give parents effective strategies for discipline and nurturing by providing materials, consultation and referral. They should promote issues of Internet safety, supervision, selecting safe babysitters, and choosing quality day care programs. Posters in waiting rooms, take-home brochures, and lists of Web addresses should be readily available for referrals for parents' use. Additional resources on child abuse prevention programs that exist in and around the community and referrals of parents to area agencies for additional information or assistance are also vital prevention interventions.

Community Awareness Professionals need to offer to provide radio or TV public service announcements to build awareness of child abuse as a societal and public health issue and an issue related to physical and mental health. Health care professionals have the credibility to promote awareness of the links between childhood trauma and future health problems.

Bystander Involvement In personal or professional capacities, professionals need to be become involved when they are concerned about a child's safety and to seek supervision or consultation when necessary. Despite great demands on their time, professionals must be willing to make referrals to Child Protective Services based on reasonable suspicion rather than waiting until they are certain to report child maltreatment.

Early Behavior Problem Identification Caregivers often consult with authorities about behavior problems with their children, who may be exhibiting reactive symptoms of being abused or of stress after trauma exposure. Behavioral problems are often nonspecific, but professionals can guide parents to seek additional assistance, while guarding against parental overreaction to self-exploration or developmentally-appropriate behavior.

Policy and Organizational Prevention Efforts Professionals should be willing to make changes in policy, hiring, supervision, and training in their own office or organization to put proven risk-reduction procedures in place. This can include establishing clinical practice guidelines to address these issues in the office and clinic.

Improved Clinical Care and Education Professionals need to recognize risk factors for violence when providing clinic care and be able to identify, treat, and refer violence-related problems at all stages of child development. There are several tools available, such as from the American Academy of Pediatrics (AAP, 2005). Professionals need to identify, for example, issues with mental illness, substance abuse, stress, inappropriate supervision, family violence and exposure to media violence, access to firearms, gang involvement and signs of poor self-esteem, school failure, and depression (AAP, 2005). Professionals need to support early bonding and attachment, educate parents on normal age-appropriate behaviors for children of all ages, and educate parents

about parenting skills, limit setting, and protective factors to be nurtured in children to help prevent a variety of injuries. Consistent discipline practices and body safety techniques should be emphasized.

Treatment and Referral Professionals need to know what they can handle through office counseling and when they need to refer families for help. They must also be cognizant of the resources available in their community to address these risks. This will require knowledge of the child welfare, emergency shelter, and substance abuse treatment systems and how to make referrals to appropriate therapists and mental health professionals.

Advocacy Professionals should use their given status in the community to advocate for the needs of individual families and for the broader needs of children in society. This includes working on public policy which can be best achieved by working with organizations that address the needs of children in different arenas. Professionals can endorse and support quality, comprehensive child-focused education and can serve on advisory boards for a local child abuse prevention agency or home visiting program, thereby assisting in networking alliances between prevention programs and the treatment field (AAP, 2009). Professionals can also be role models and leaders in their communities by offering support for family and neighbors who might need encouragement, help, or referrals and being advocates to assure that their communities have resources and services for parents.

Keeping Up to Date With the Field Professionals can be more effective advocates if they are knowledgeable about the current prevention field and evidence-based strategies for prevention. In the CPS practice field, professionals can identify prevention opportunities within the population of families and children who come to their system, but who are unsubstantiated or do not require that the children be taken into protective custody. Professionals in the "more traditional" fields of practice can help prevention professionals and volunteers by recognizing the importance of their prevention work, participating in multidisciplinary training, and helping to bridge the gap between research and practice.

References

Alexander, R., Baca, L., & Fox, J. A., Frantz, M., Huffman, L. et al. (2003). *New hope for preventing child abuse and neglect: Proven solutions to save lives and prevent future crime.* Washington, DC: Fight Crime: Invest in Kids. Retrieved September 26, 2008, from: http://www.fightcrime.org/reportlist.php

American Academy of Pediatrics (AAP). (2005). Connected Kids: Safe Strong Secure, A new violence prevention program from the American Academy of Pediatrics. Elk Grove Village, IL: AAP.

American Academy of Pediatrics, Council on Community Pediatrics (AAP). (2009). The role of preschool home-visiting programs in improving children's developmental and health outcomes. *Pediatrics*, 123(2), 598–603.

American Acadmy of Pediatrics, Task Force on Violence (AAP). (1999). The role of the pediatrician in youth violence prevention in clinical practice and at the community level. *Pediatrics*, 103(1), 173–181.

Anda, R. F., Whitfield, C. L., Felitti, V. J., Chapman, D., Edwards, V. J., Dube, S. R., & Williamson, D. F. (2002). Alcohol-impaired parents and adverse childhood experiences: The risk of depression and alcoholism during adulthood. *Psychiatric Services*, *53*, 1001–1009.

Barlow, J., Davis, H., McIntosh, E., Jarrett, P., Mockford, C., & Stewart-Brown, S. (2007). Role of home visiting in improving parenting and health in families at risk of abuse and neglect: Results of a multicentre randomised controlled trial and economic evaluation. *Archives of Diseases in Children, 92*, 229–233.

Barr, R. G., Rivara, F. P., Barr, M., Cummings, P., Taylor, J., Lengua, L. J., & Meredith-Benitez, E. (2009). Effectiveness of educational materials designed to change knowledge and behaviors regarding crying and shaken baby syndrome in mothers of newborns: A randomized, controlled trial. *Pediatrics*, 123(6), 972–980.

Bolen, R. M. (2003). Child sexual abuse: Prevention or promotion? *Social Work, 48*, 174–185.

Brayden, R. M., Altemeier, W. A., Dietrich, M. S., Tucker, D. D., Christensen, M. J., McLaughlin, J., & Sherrod, K. B. (1993). A prospective study of secondary prevention of child maltreatment. *Journal of Pediatrics*, 122(4), 511–516.

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32, 513–530.

Bugental, D. B., & Schwartz, A. (2009). A cognitive approach to child maltreatment prevention among medically at-risk infants. *Developmental Psychology, 45*(1), 284–288.

Caldera, D., Burrell, L., Rodriguez, K., Crowne, S. S., Rohde, C., & Duggan, A. (2007). Impact of a statewide homevisiting program on parenting and on child health and development. *Child Abuse & Neglect*, 31(10), 829–852.

Caldwell, R. A. (1992). The costs of child abuse vs. child abuse prevention: Michigan's experience. Accessed September 26, 2008, at: https://www.msu.edu/~bob/cost1992.pdf

Centers for Disease Control and Prevention (CDC). (2007). Preventing maltreatment: Program activities guide. Atlanta, GA: Author. Retrieved July 8, 2009, from:

http://www.cdc.gov/ncipc/dvp/pcmguide.htm Centers for Disease Control and Prevention (C

Centers for Disease Control and Prevention (CDC). (2008). Strategic direction for maltreatment prevention: Preventing child maltreatment through the promotion of safe, stable, and nurturing relationships between children and caregivers. Atlanta, GA: Authors.

Centers for Disease Control and Prevention (CDC). (2009). *Parent training programs: Insight for practitioners.* Atlanta, GA: Author.

Chaffin, M., Bonner, B. L., & Hill, R. F. (2001). Family preservation and family support programs: Child maltreatment outcomes across client risk levels and program types. *Child Abuse & Neglect*, *25*(11), 1269–1289.

Children's Safety Network. (2007). An MCH approach to preventing child maltreatment. Newton, MA: Author.

Daro, D. (1988). Confronting child abuse: Research for effective program design. Washington, DC: National Academy of Press.

Daro, D., & Dodge, D. A. (2009). Creating community responsibility for child protection: Expanding partnerships, changing context. *The Future of Children, 19*(2), 67–93.

Davis, K., & Gidycz, C. (2000). Child sexual abuse prevention programs: A meta-analysis. *Journal of Clinical & Child Psychology*, 29, 257–265.

De Bellis, M. D. (2005). The psychobiology of neglect. *Child Maltreatment*, 10(2), 150–172.

DePanfilis D., Dubowitz, H., & Kunz, J. (2008). Assessing the cost-effectiveness of Family Connections. *Child Abuse & Neglect*, 32(3), 335–351.

Dias, M. S., Smith, K., deGuehery, K., Mazur, P., Li, V., & Shaffer, M. L. (2005). Preventing abusive head trauma among infant and young children: A hospital-based, parent education program. *Pediatrics*, 115(4), 470–477.

Donovan, E. F., Ammerman, R. T., Besl, J., Atherton, H., Khoury, J. C., Altaye, M., Putnam, F. W., & Van Ginkel, J. B. (2007). Intensive home visiting is associated with decreased risk of infant death. *Pediatrics*, *119*, 1145–1152.

Dube, S. R., Anda, R. F., Felitti, V. J., Chapman, D. P., & Giles, W. H. (2003). Childhood abuse, neglect, and household dysfunction and the risk of illicit drug use: The adverse childhood experiences study. *Pediatrics*, 111, 564–572.

Dubowitz, H. (2002). Preventing child neglect and physical abuse: A role for pediatricians. *Pediatrics in Review*, 23(6), 191–196.

Dubowitz, H., Feigelman, S., Lane, W., & Kim, J. (2009). Pediatric primary care to help prevent child maltreatment: The Safe Environment for Every Kid (SEEK) model. *Pediatrics*, 123(3), 858–864.

Duggan, A., McFarlane, E., Fuddy, L., Burrell, L., Higman, S. M., Windham, A., & Sia, C. (2004). Randomized trial of a statewide home visiting program: impact in preventing child abuse and neglect. *Child Abuse & Neglect*, 28(6), 589–595.

Dumont, K., Mitchell-Herzfeld, S., Greene, R., Lee, E., Lowenfels, A., Rodriguez, M., & Dorabawila, V. (2008). Healthy Families New York (HFNY) randomized trial: Effects on early child abuse and neglect. *Child Abuse & Neglect*, 32(2), 295–315.

Eckenrode, J., Ganzel, B., Henderson, C. R., Smith, E., Olds, D. L., Powers, J., Cole, R., Kitzman, H., & Sidora, K. (2000). Preventing child abuse and neglect with a program of nurse home visitation: The limiting effects of domestic violence. *Journal of the American Medical Association*, 284(11), 1385–1391.

Eluvathingal, T. J., Chugani, H. T., Behen, M. E., Juhasz, C., Muzik, O., Maqbool, M., Chugani, D. C., & Makki, M. (2006). Abnormal brain connectivity in children after early severe socioemotional deprivation: A diffusion tensor imaging study. *Pediatrics*, 117, 2093–2100.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (1998). The relationship of adult health status to childhood abuse and household dysfunction. *American Journal of Preventive Medicine*, *14*, 245–258.

Finkelhor, D. (2007). Prevention of sexual abuse through educational programs directed toward children. *Pediatrics*, 120(3), 640–645.

Finklehor, D., & Jones, L. M. (2004). Explanations for the decline in child sexual abuse cases. *OJJDP: Juvenile Justice Bulletin*. Retrieved August 6, 2006, from: http://www.ojjdp.ncjrs.gov

Gibson, L., & Leitenberg, H. (2000). Child sexual abuse prevention programs: Do they decrease the occurrence of child sexual abuse? *Child Abuse and Neglect*, 24(9), 1115–1125.

Gomby, D. S. (2005). *Home visitation in 2005: Outcomes for children and parents*.[Invest In Kids working paper no. 7]. Washington, DC: Committee for Economic Development.

Gomby, D. S. (2007). The promise and limitations of home visiting: Implementing effective programs. *Child Abuse & Neglect*, 31(6), 793–799.

Helfer, R. E. (1982). A review of the literature on the prevention of child abuse and neglect. *Child Abuse & Neglect*, 6(2), 251–261.

Helfer, R. E. (1987). The perinatal period, a window of opportunity for enhancing parent-infant communication: An approach to prevention. *Child Abuse & Neglect*, 11(4), 565–579.

Johnson, C. F. (1998). Actions pediatricians can take to prevent child maltreatment: A checklist [unpublished manuscript].

King, W. J., Klassen, T. P., LeBlanc, J., Bernard-Bonnin, A., Robitaillle, Y., Pham, B., Coyle, D., Tenenbein, M., & Pless, I. B. (2001). The effectiveness of a home visit to prevent childhood injury. *Pediatrics*, 108(2), 382–388.

Lundahl, B., & Harris, N. (2006). Delivering parent training to families at risk to abuse: Lessons from three meta-analyses. *APSAC Advisor*, 18(3), 7–11.

MacLeod, J., & Nelson, G. (2000). Programs for the promotion of family wellness and the prevention of child maltreatment: A meta-analytic review. *Child Abuse & Neglect*, 24(9), 1127–1149.

MacMillan, H. L., Thomas, B. H., Walsh, C. A., Boyle, M. H., Shannon, H. S., & Gafni, A. (2005). Effectiveness of home visitation by public health nurses in the prevention of the recurrence of child physical abuse and neglect: A randomised controlled trial. *Lancet*, *365*, 1786–1793.

MacMillan, H. L., Wathen, C. N., Fergusson, D. M., Leventhal, J. M., & Taussig, H. N. (2009). Interventions to prevent child maltreatment and associated impairment. *Lancet*, *373*, 250–266.

Maxfield, M. G., & Widom, C. S. (1996). The cycle of violence: Revisited six year's later. *Archives of Pediatric and Adolescent Medicine*, 150(4), 390–395.

McCurdy, K., & Daro, D. (1994). Child maltreatment: A national survey of reports and fatalities. *Journal of Interpersonal Violence*, 9(1), 75–94.

Middlebrooks, S., & Audage, N. C. (2008). *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.

Mikton, C., & Butchart, A. (2009). Child maltreatment prevention: A systematic review of reviews. *Bulletin of the World Health Organization*, 87, 353–361.

National Research Council. (1993). *Understanding child abuse and neglect*. NY: Free Press, Macmillan.

National Sexual Violence Resource Center. (2006). *National Resource Directory and Handbook Preventing Child Sexual Abuse.* Retrieved August 18, 2006, from:

http://www.nsvrc.org/publications/directories/csa_directory/index.html Noor, I., & Caldwell, R. A. (2005). *The costs of child abuse vs. child abuse prevention: A multi-year follow-up in Michigan.* Retrieved September 26, 2008, from: https://www.msu.edu/~bob/cost2005.pdf

Olds, D. L. (2006). The nurse-family partnership: An evidence-based preventative intervention. *Infant Mental Health Journal*, 27(1), 5–25.

Olds, D. L., Eckenrode, J., Henderson, C. R., Kitzman, H., Powers, J., Cole, R., et al. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect: 15-year follow-up of a randomized trial. *Journal of the American Medical Association*, 278, 637–643.

Olds, D. L., Henderson, C. R., Kitzman, H. J., Tatlebaum, R., & Chamberlin, R. (1986). Improving the delivery of prenatal care and outcomes of pregnancy: A randomized trial of nurse home visitation. *Pediatrics*, 77(1), 16–28.

Olds, D. L., Robinson, J., O'Brien, R., Luckey, D. W., Pettitt, L. M., Henderson, C. R., Ng, R. K., Sheff, K. L., Korfmacher, J., Hiatt, S., & Talmi, A. (2002). Home visiting by paraprofessionals and nurses: A randomized, controlled trial. *Pediatrics*, 110(3), 486–496.

Ondersma, S. J., & Chase, S. K. (2003). Substance abuse and child maltreatment prevention. *The APSAC Advisor*, 15(3), 8–11.

Palusci, V. J., Crum, P., Bliss, R., & Bavolek, S. J. (2008). Changes in parenting attitudes and knowledge among inmates and other at-risk populations after a family nurturing program. *Children and Youth Services Review, 30*(1), 79–89.

Palusci, V. J., Zeemering, W., Bliss, R. C., Combs, A., & Stoiko, M. A. (2006, April 29). *Preventing abusive head trauma using a directed parent education program.* Presented at the Pediatric Academic Societies Meeting. Atlanta, GA.

Patterson, J., Barlow, J., Mockford, C., Klimes, I., Pyper, C., & Stewart-Brown, S. (2002). Improving mental health through parenting programmes: Block randomized controlled trial. *Archives of Diseases in Children, 87,* 472–477.

Peters, R., & Barlow, J. (2004). Systematic review of instruments designed to predict child maltreatment during the antenatal and postnatal periods. *Child Abuse Review*, 12, 416–439.

Plotnick, R.D., & Deppman, L. (1999). Using benefit-cost analysis to assess child abuse prevention and intervention programs. *Child Welfare*, 78(3), 381–407.

Plummer, C.A. (2001). Prevention of child sexual abuse: A survey of 87 programs. *Violence and Victims*, 16(5), 575–588.

Plummer, C.A., & Palusci, V. J. (In press). Sexual Abuse Prevention, In R. Kaplan (Ed.), *Sexual assault medical care for the victim: A guide for clinicians. Vol. 1: Children and Adolescents.* St Louis, MO: GW Medical Publishing.

Prevent Child Abuse America. (2008). BECAUSE Kids Count! Building and Enhancing Community Alliances United for Safety and Empowerment. Retrieved September 26, 2008, from:

 $http://member.preventchildabuse.org/site/PageServer?pagename=research_because_kids_count.$

Prinz, R. J., Sanders, M. R., Shapiro, C. J., Whitaker, D. J., & Lutzker, J. R. (2009, January 22). Population-based prevention of child maltreatment: The U.S. Triple-P System Population Trial. *Prevention Science* [online]. DOI: 10.1007/s11121-009-0123-3.

Reading R., Bissell, S., Harvin, J., Masson, J., Moynihan, S., Pais, M. S., Thoburn, J., & Webb, E. (2009). Promotion of children's rights and prevention of child maltreatment. *Lancet*, *373*, 332–343.

Reynolds, A. J., Mathieson, L. C., & Topitzes, J. W. (2009). Do early childhood interventions prevent child maltreatment? *Child Maltreatment*, 14(5), 182–206.

Rigney, L., & Brown, E. J. (2009, Winter). The use of paraprofessionals in a prevention program for child maltreatment: History, practice, and the need for better research. *The APSAC Advisor*, 21, 13–20.

Rispens, J., Aleman, A., & Goudena, P. (1997). Prevention of child sexual victimization: A meta-analysis of school programs. *Child Abuse & Neglect*, 21, 975–987.

Schnitzer, P. G., Covington, T. M., Wirtz, S. J., Verhoek-Oftedahl, W., & Palusci, V.J. (2008). Public health surveillance of fatal child maltreatment: Analysis of three state programs. *American Journal of Public Health*, *98*(2), 296–303.

Schuster, M. A., Wood, D. L., Duan, N., Mazel, R. M., Sherbourne, C. D., & Halfon, N. (1998). Utilization of well-child care services for African American infants in a low-income community: Results of a randomized, controlled case management/home visitation intervention. *Pediatrics*, 101, 999–1005.

Sege, R. D., Hatmaker-Flanigan, E., De Vos, E., Levin-Goodman, R., & Spivak, H. (2006). Anticipatory guidance and violence prevention: Results from family and pediatrician focus groups. *Pediatrics*, 117, 455–463.

Sweet, M. A., & Appelbaum, M. I. (2004). Is home visiting an effective strategy? A meta-analytic review of home visiting programs for families with young children. *Child Development* 75(5), 1435–1456.

Wang, C. T., & Holton, J. (2008). *Total estimated cost of child abuse and neglect in the United States*. Chicago: Prevent Child Abuse America.

Williams, Stern & Associates (2005). *Health Families Florida* evaluation report: *January1*, 1999–December 31, 2003. Miami, FL: Author.

World Health Organization (WHO), & the International Society for the Prevention of Child Abuse and Neglect (IPSCAN). (2006). Preventing child maltreatment: A guide to taking action and generating evidence. Geneva, Switzerland: WHO.

Zielinski. D., & Bradshaw, C. (2006). Ecological influences on the sequelae of child maltreatment: A review of the literature, *Child Maltreatment*, 11, 49–62.

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