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# Primary prevention of child abuse in the outpatient setting

## A Family Nurse Practitioner Intervention

## Utilizing Theory of Planned Behavior

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Abstract

The burden and cost to society that results from child abuse and abusive head trauma (AHT) are well known. This article provides guidance for nurse practitioners who wish to engage in primary prevention of child abuse and AHT through parent-teaching in the outpatient setting. The role of the nurse practitioner is proactive and the use of adult learning theory is emphasized. This primary prevention method utilizes parent-teaching and may be used independently in the outpatient setting or as a complement to hospital-based parent education programs aimed at preventing child abuse and AHT. There is evidence in the literature that clearly demonstrates that the use of anticipatory guidance is an effective method for reducing the incidence of child abuse and AHT, especially in families with children between the ages of 0 – 36 months of age. Primary prevention is an essential level of care to achieve this goal.

## Primary prevention of child abuse in the outpatient setting

### A Family Nurse Practitioner Intervention utilizing Theory of Planned Behavior

The purpose of this guideline is to promote a primary prevention strategy for child abuse in the outpatient setting that will significantly reduce the incidence of child abuse and abusive head trauma in the 0 – 36 month-old pediatric population. According to the Centers for Disease Control and Prevention (2009), in 2006 nearly four million children were the subjects of child maltreatment investigations. And approximately 905,000 children were victims of substantiated maltreatment in child protective service investigations. Child maltreatment is defined as *"…an act or series of acts of commission or omission by a parent or other caregiver that results in harm, potential harm, or threat of harm to a child"* (CDC, 2009). Child maltreatment may involve either acts of commission and omission, also known as child abuse and child neglect respectively.

An act of commission is defined as an overt physical act or the use of words that cause harm or threats of harm to a child (CDC, 2009). Such actions include physical abuse, sexual abuse and emotional abuse. Examples of physical abuse include, but are not limited to, burning, hitting, kicking and shaking. Sexual abuse involves a perpetrator encouraging a child to engage in the spectrum of sexual acts ranging from fondling to rape and other sexual activities for gratification or financial gain. Emotional abuse generally involves name calling, shaming or threatening statements that harm a child's well-being and diminish their self-worth. An act of omission involves the unsafe pattern of behavior that results in a failure to meet a child's basic needs for education, food,

healthcare and shelter. The CDC (2009) reports that in 2006 of the 905,000 victims of child maltreatment, 1,530 children died from abuse and neglect in the United States. In fact, the CDC statistics reveal that children under four years of age are the highest risk age group to sustain significant injury or death in cases of child maltreatment as they comprise 78% of the deaths from child maltreatment. Dias (2005) reports that children between the ages of 0 – 36 months make up a majority of the morbidity and mortality rate for Abusive Head Trauma (AHT), the most common type of catastrophic child maltreatment injury.

Dias and colleagues (2005) regard AHT as one of the most devastating and costly forms of child maltreatment because the pathological mechanisms of injuries that include blunt trauma and shaking and may result in varying degrees of permanent disabilities, severe developmental delays, blindness, chronic encephalopathy and seizure disorders with reduced quality of life and shortened life expectancy. According to Dias, et al. (2005), there is an approximate 30% mortality rate for victims of AHT and of the survivors; nearly 50% suffer permanent neurological impairment. What begins as an acute episodic traumatic event often translates into a long term disability. The long-term management of the survivors, the loss of societal productivity and loss of revenue in addition to the cost of incarceration of the perpetrators results in significant economic and social burden to society (Dias, 2005). Christian and colleagues (2009) acknowledge that the general public is familiar with the term Shaken Baby Syndrome but encourage healthcare providers to use the term Abusive Head Trauma to appropriately recognize the constellation of injuries and various pathological mechanisms by which injury and secondary insults occur in reference to non-accidental brain and head trauma within the

pediatric population. The literature supports that shaking is only one mechanism by which non-accidental brain injury may occur. AHT includes shaking, blunt trauma, rotational and shearing injuries that often co-occur with subsequent secondary hypoxic ischemic brain injury. In severe cases of AHT, cervical and thoracic spine injuries may be present with respiratory compromise contributing to morbidity and mortality. The American Academy of Pediatrics issued a policy statement in May 2009 referencing the importance of the use of the term AHT, as opposed to Shaken Baby Syndrome, to account for the spectrum of injuries found in AHT. The AAP recommends the use of the diagnosis AHT in order to avoid legal challenges to the term “shaken baby syndrome”. Such legal challenges interfere with important scientific and legal issues during court proceedings. The more scientific term AHT will detract from red-herring tactics such as deliberating semantics about shaken baby syndrome and the mechanism of injury with the resulting injurious state or cause of death.

Dias and others (2005), report that parents are very often the perpetrators of AHT and child abuse with the most severe injuries delivered by male caregivers. All too often the triggers for abusive parents to cause AHT in young children are frustration and poor impulse control secondary to infantile crying and the disagreeable behavioral features observed in toddlers. Barr and colleagues (2006) detailed convergent evidence that demonstrated the correlation between the incidence of AHT and the “normal crying curve” involving crying time for infants that starts to increase at 2 – 3 weeks of age and peaks at 5 – 6 weeks of age. Their crying curve research shows a similar curve to hospitalized AHT cases that peak 4 – 6 weeks later. Parents may not have adequate preparation and support to deal with the parental demands and responsibilities of

raising an infant or toddler. Well-adjusted parenting and caregiver styles are learned behaviors*. Parents with unrealistic expectations and poor coping skills are at increased risk for engaging in abusive behavior towards children. Abusive parents may have risk factors such as substance abuse, low self-esteem, mental or physical disability, depression, history of abuse as a child, poor coping skills, poor impulse control, history of violent behavior or history of being raised in a group setting with no positive parental role (CDC 2009). Parents with histories of alcohol and substance abuse, criminal activities, sexual promiscuity, poverty and mental health disturbances are at risk for engaging in child maltreatment. Caregiver strain, familial tendencies and low self-esteem are also risk factors for abuse in children. A parent may not be prepared for the responsibility of managing an infant that requires continuous sustenance and is prone to inconsolable crying. Children that do not have extended family in close proximity are at increased risk for child abuse. Approximately 1 out of 7 children between the ages of 2 - 17 years-old have experienced some form of maltreatment. It is estimated that a report of abuse is made every 10 seconds in this country. While women are more likely and more frequently the perpetrators of child abuse; men tend to abuse more severely. Male abusers, in particular non-biological males, are more often responsible for severe child abuse outcomes (Dias, 2005).

Society makes a concerted effort at the tertiary level to address child abuse and prevent re-abuse. Peddle (2002) reports that in the United States, the Federal government passed the Child Abuse Prevention and Treatment Act, known as CAPTA. As a result, most government funds are allocated for child protection infrastructure, such as child protection services and related programs. Many state and county child

protection agencies have adopted Structured Decision Making (SDM) developed by the Children's Research Center (1999). SDM is an effective program designed to provide assessment tools with a decision-making tree to structure assessment procedures and stratify risk for imminent harm, family risk assessment and appropriateness of family re-unification by providing quantitative values and corresponding tiered decision-making policies to guide social worker intervention and reduce social worker variation in response to families in crisis in cases involving substantiated child abuse. The goal of SDM is to prevent repeated abuse once abuse has been substantiated.

More funding and intervention are needed at the primary and secondary level to prevent child abuse. MacMillan (2002) reports secondary level methods for screening and risk identification for abuse have yielded unreliable results due to the low sensitivity and specificity of the screening tests. MacMillan opines that high false-positive rates of screening tests for child maltreatment and the erroneous labeling of parents as potential abusers resulted in harms outweighing the benefits with the use of invalid screening tools. MacMillan further stated the Elmira study showed a successful reduction in the incidence of child maltreatment in first-time impoverished mothers and their children that received home visitation by nurses during the perinatal period and through the first two years of childhood. MacMillan opines that the presence of risk factors is a poor predictor of abuse and the failure of the Child Abuse Potential Inventory (CAPI) due to the unacceptably high false-positive rate is one example. Krugman (2007) concurs and opines that the Nurse-Family Partnership (NFP) remains the most effective intervention for high-risk families and their children. The NFP (2009) model elements are evidence-based in expert opinion, field lessons, research and theoretical rationales. Fidelity to the

NFP model yields desirable results (NFP 2009). For example, client participation is voluntary and involves first-time, low-income mothers that enroll early in pregnancy and agree to home visits through the pregnancy and the first two years of the child's life. An NFP agency must agree to send only nurses with a minimum of a baccalaureate degree in nursing (BSN) for home visits. All nurses in supervisory roles must have BSNs. Nurses must carry a case load no greater than 25 active clients. And supervisors must have no more than eight nurses to supervise. NFP data are collected on a continuous basis.

To date, longitudinal studies implementing parental education programs have yielded favorable results for primary prevention of AHT and child abuse. The research conducted by Dias (2005) and Barr (2006) demonstrates a correlation between infantile crying and the lack of caregiver preparation to effectively deal with this normal stressor. Dias opines that anticipatory guidance during the period of time when a new baby joins the family through early childhood provides contextually significant information. Dias and colleagues (2005) demonstrated parents are receptive to the information provided to them as they welcome their new baby into the family. This is a time when parental interaction with healthcare providers is most concentrated.

## Theory of Planned behavior, a middle-range theory sub-structed from Social Cognitive Theory

Adults learn best when experiences are contextual and applicable during times of stress and change (Peterson, 2004). Education to prepare parents to recognize child-rearing stress and avoidance of injurious behavior towards their

children during the early childhood phase (i.e., 0 – 36 months-of-age) will result in reduced morbidity and mortality (Dias 2005). Adult learners will be more receptive to the message and retain the information along the continuum from birth of a baby through child-rearing of young children (Dias 2005). Furthermore, parents will acknowledge an appreciation for the message and will be more inclined to enter into a social contract to prevent child abuse after the educational information is received. Parental participation is guided by their perceived moral obligation. Therefore, educating the previously identified subset of parents in the outpatient setting through vicarious learning is the goal of this intervention. Vicarious learning is achieved through observational and instructional learning of information provided through discussion, posters, pamphlets, videos and positive reinforcement that involves parental role modeling through management of inconsolable infantile crying. The provider will teach the parent to develop a plan for respite care and stress management. The use of parental foresight, imagery and coping techniques will be encouraged; similar to how a parent develops a fire evacuation plan or a family plan for handling emergencies.

Healthcare providers recognize the need for client education on the subject of AHT and child abuse prevention within the family practice setting. The theory of planned behavior (TPB) is utilized as the framework for this education module. TPB was sub-structed from social cognitive theory (Peterson 2004). According to Bandura (1982), social cognitive theory espouses the recognition that human agency is utilized to pro-actively assume responsibility for developing and executing behaviors to bring about a desired change and achieve a desired goal. In short, Bandura (1982)

postulated that thoughts and self-reflection can regulate actions and positively impact behavior. According to social cognitive theory, people are pro-active and self-reflective allowing for cognitive growth, adaptation and change towards a desired goal, and a realization of self-efficacy. Peterson and Bredow (2004) explain the principle of compatibility between attitude and behavior within the agent and the impact of the agent's action, target, context and time. Simply stated, the parental desire to prevent AHT and child abuse will translate into self-directed behavior to achieve this goal.

Once the healthcare provider has provided education to the parent/caregiver (agent) in the clinical setting, the assumption is that the agent will rationalize, use foresight and use deliberate consideration to modify and adapt their behavioral intention and ultimately engage in behavior that will preclude the occurrence of child abuse and AHT within domestic situations. During the clinical encounter the parent is encouraged to acknowledge and share their own perception of the difficulties in performing the specific child abuse and AHT prevention behaviors such as meeting the child's basic needs, ensuring the child is in a safe environment like a crib or playpen, leaving the room, playing music or calling a friend or family member to help with child care. The change in parental behavior is guided by an improved self-identity and perceived moral obligation to prevent AHT and child abuse.

And since people don't exist as islands unto themselves, other people, the collective agency can assist in this process of learned forethought, behavioral change, improved self-esteem and self-concept. The nurse practitioner is the change-agent and is one part of the collective-agency in this primary intervention. Ultimately, the goal is to provide information for health providers to effectively engage in client

education that will assist the parent/caregiver (agent) with foresight and planning behavior that will reduce the incidence of AHT and child abuse within the practice region.

## Clinical/Managerial Question

The goal and necessity for primary prevention of AHT and child abuse with the use of anticipatory guidance in the outpatient setting is identified. Question: What primary intervention will allow the family nurse practitioner to achieve prevention and effectively reduce the incidence of AHT and child abuse in the pediatric patient population?

This nurse practitioner intervention will address specifically the educational needs of parents to prevent AHT and child abuse. The intervention will not be cost-prohibitive or labor-intensive. The intervention is simple to administer and may be tracked in a similar manner as the immunization program and other health maintenance issues. The target population will include parents in the perinatal group and parents of children, particularly with children between the ages of 0 – 36 months in the outpatient setting. These parents are targeted specifically because statistically children between the ages of 0 – 36 months are proven to be at the highest risk for AHT (Dias, 2005).

The National Association of Children's Hospitals and Related Institutions (NACHRI 2003) has made child maltreatment prevention programs a priority. The NACHRI, while recognizing that adequate funding for preventative programs is a priority, the organization also listed their first key challenge is to recruit sufficient nursing support for their programs. In the NACHRI Profile series they acknowledge the extent

to which nursing is already committed to an extensive list of health maintenance topics for new parents regarding the care of a newborn prior to discharge home from the hospital.

## Appraisal of the evidence

Article #1. (Level A: meta-analysis) Krugman and colleagues (2007) acknowledge that some child abuse prevention programs have resulted in a lack of effectiveness as evidenced by randomized trials. An appraisal of child abuse prevention home-visiting programs, parent-training programs, abusive head trauma primary prevention, primary prevention, sexual abuse prevention and effectiveness of laws that ban corporal punishment was conducted. The authors acknowledge one exception to the lack of success within these programs, Krugman and colleagues report that the Nurse Family Partnership prevention program and study was the most effective intervention for families at risk (see Table 1.1).

Article #2. (Level B: prospective non-randomized clinical trial) Dias and colleagues (2005) report that a coordinated, hospital-based parent education program for the prevention of AHT focused on parents of newborns effectively reduced the regional incidence of AHT within the service area of an 8-county region of western New York. The population outside of the 8-county region was the control group and received no intervention. The experimental group received face-to-face discussion with nurses, received written information, observed video and signed commitment statements to avoid abusive acts that may result in AHT. During the 5.5 years of the program the incidence of AHT decreased by 47% in that region with no corresponding decrease

noted in the control group outside the 8-county region of New York and Pennsylvania (See Table 1.1).

Article #3. (Level B: non-quantitative systematic review) The NACHRI Profile Series: Children's Hospitals at the Frontlines Confronting Child Abuse and Neglect outlines how various health systems in New York, Pennsylvania, Minnesota, Michigan, Utah and Arizona implemented The New York Model for prevention of AHT in children. The article describes the different modifications and tailored approaches utilized by various facilities to roll out AHT/SBS prevention programs at birth centers, community health programs, and healthcare offices within heterogeneous patient populations (See Table 1.1).

## Utility for practice

The model of the parental educational intervention will be similar to The New York Model described by Dias (2005). The materials for this intervention will include brochures, video/DVD, paper and templates for commitment statements, video post-tests and organizational resource lists. The staff will identify parents with new confirmed pregnancies, newborn well-baby visits and new patient visits involving children between the ages of 0 – 36 months will be included in this educational program during appointment scheduling and new patient enrollment activities.

Trust-building in the provider-parent relationship is essential to a successful collaborative relationship. The provider will preface the initial visit with information about health maintenance teaching and how topics will be introduced at each visit. Prevention of AHT and child abuse will be introduced in the same manner as other

health maintenance topics that are relevant to the care of a newborn and young child. The staff will introduce the prevention topic in a culturally competent and professional manner. The introduction will include information about the AHT prevention program and how it is introduced as policy for all new parents within the practice. Further, it will be explained that the intention for initiating discussions about AHT with parents is to allow for collaborating, planning and creating a working relationship with parents in order to provide assistance and resources when needed with the common goal being prevention. The use of written material and itemized checklists in the pediatric patients' charts will be used to guide staff with consistent implementation of the program, much like the methods used to track immunization schedules and other health maintenance issues.

Since a high degree of parental retention of written information has been demonstrated in previous studies, brochures understandable to the general lay public will be provided to parents during the initial contact (Dias, 2005). A brief discussion between staff/nurse practitioner and parents about how infants may cry for extended periods of time or how small children may have disagreeable moods during the course of the day and how the parents are coping at home. Teaching will include various suggestions for methods designed to assist parents with coping with stress; such as parental recognition of the importance of assessing an infant's basic needs, assessing for fatigue and over-stimulation or illness; as well as a plan for placing the child in a safe area, such as a crib or playpen and also the development of a respite plan or a plan for eliciting family support with child-rearing responsibilities. More specifically, teaching will encourage parental assessment of the child for hunger, wet diapers and comfort or the

need to be held or not held. A plan will be developed anticipating the parent's action when the child doesn't stop crying, is inconsolable or misbehaves. Assurances will be provided to the parent that it is normal if child continues to cry even after their needs have been met. A brief discussion about what actions the parent may take after the parent determines that the child's basic needs have been met; such as putting the child in a safe place (crib/playpen) and leaving the room, remembering to check on the infant/child at frequent intervals and engaging in a relaxing activity such as listening to music, calling a friend, watching a show or asking a babysitter/family member to come over for respite. The parent will be encouraged to develop a plan that includes asking family members and friends to assist with child-rearing responsibilities. Education must include the recognition that it takes more than one person to care for an infant or raise a child. Depending on the content of the conversation between the nurse practitioner and the parent, resources will be provided for parents to contact anger management and/or community child care programs and parenting classes when indicated. Hotline and support service resource lists will be provided to parents. Also, other suggestions that include advice to parents about how to avoid holding their babies during arguments or stressful moments if they feel they are at risk for losing their tempers. The abuse-prevention plan should include a plan for a cooling-off period and developing an effective coping behavior. Teaching parents the importance of not ignoring stress and irritability in each other while caring for their children, especially when one parent is primarily providing the child care in the absence of the other. While these coping methods may sound like the familiar subjects found in parenting classes, the cause and effect link between abusive head trauma prevention and parental coping is emphasized

in this intervention. Specific brochures may be developed for fathers, step-fathers and male caregivers as this population of parents/caregivers are at an increased risk for severe outcomes associated with children abuse. An AHT prevention video will be offered during the office visits or played in the waiting room on closed-circuit television. A short post-video test will be offered on a voluntarily basis to be completed by the parent to evaluate understanding of the material. A brief discussion asking the parent to share the message with the other parent, caregivers and older children in the family will follow with a review of the commitment statement that acknowledges their willingness to share the message with other people and to remember their personal plan for coping. According to Dias (2005), the commitment statement is a social contract between parents, providers and the community that re-enforces parental commitment to share the message with other parents and caregivers about AHT prevention strategies. Asking parents to review and sign the commitment statement was the central theme in Dias's New York model for AHT prevention. Signing the commitment statement is voluntary on the part of the parents and was rarely refused during the course of the study. Dias opines this step in the intervention was effective in reducing the incidence of AHT within the regional study group of the New York Model (Dias, 2005).

## Limitations of the intervention

Limitations of this intervention include provision of adequate staffing to implement the program, provision of adequate funding for educational materials, limitation regarding the potential lack of parental understanding of the material, implementing the right approach to initiate discussion without putting parents on the defensive and identifying the office-champion to coordinate the prevention program and ensure

continuity in the delivery to parents within the practice. In multi-cultural patient populations there may be language barriers encountered. There will also be occasional parental unwillingness to learn and participate in the program.

## Conclusion

We recognize that all children are at risk for abuse, especially between the ages of 0 – 36 months of age (Dias 2005). Communication and collaboration with parents is essential to preventing AHT and child abuse in children. In order to prevent AHT and child abuse, it is essential that parents are taught to be proactive, self-reflective and make an effort to provide a supportive environment for children by developing healthy approaches to coping with the stress of raising children. Tailoring the intervention plans for the specific needs of the parents through trust-building and the provision of community services and resources is important. Dias (2005) demonstrated that through effective provider-parent communication the incidence of AHT and child abuse may be reduced significantly. The research of Dias and colleagues has demonstrated that providing parents with the tools to seek assistance before child abuse occurs is an effective strategy for primary prevention. Anticipatory guidance for AHT prevention has been proven an effective strategy for reducing the incidence of AHT by 47% (Dias 2005). AHT prevention programs in primary healthcare settings will reduce the incidence of AHT and therefore reduce the overall incidence of non-accidental catastrophic injury in children. Parents and their small children will benefit from this primary intervention of education and gentle reminders for the prevention of AHT and child abuse through the early childhood years. This will translate into an overall reduction in cost and burden to society associated with child abuse for years to follow.

**Table 1.1**

| Authors | Design, Purpose, and Sample | Findings and Conclusions | Critique |
|---|---|---|---|
| Krugman, Lane & Walsh | Review of RCTs, cross-sectional, and longitudinal studies. | Prevention of AHT can be achieved through nursing Intervention at crucial times such as perinatal/post-partum and well-child visits. | Strengths: simple cost effective dramatic results Criticism: no meta-analysis |
| Dias, Smith, deGuehery, Mazur, Li & Shaffler | Prospective study of a region - implementing a parental education program to 8-county service area. Outlying geographical region did not receive intervention and served as the control group. | Parental education program effectively reduced AHT in children aged 0 – 36 months in the study group by 47% with no corresponding decrease in the control group. | Strengths: measurable effective simple Criticism: Not a RCT |
| NACHRI Profile Series | Comparison of prospective studies Implemented in New York, Pennsylvania, Minnesota, Michigan, Utah and Arizona | Educational programs effective but hindered by various state and institutional policies. | Strengths: Multi-state Weakness: Inconsistent |

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End Notes

* The terms *agent, caregiver* and *parent* are synonymous throughout this article.

*** Funding for primary prevention programs for AHT and child abuse was obtained through grants from The Centers for Disease Control and Prevention, the Doris Duke Charitable Foundation and the UNC Injury Prevention Research Center.