# PREVENTING ABUSIVE HEAD INJURIES THROUGH HOSPITAL-BASED PARENT EDUCATION:

# THE DELAWARE SHAKEN BABY SYNDROME PREVENTION AND AWARNESS PROGRAM

## REPORT TO THE CHILD PROTECTION ACCOUNTABILITY COMMISSION/CHILD DEATH, NEAR DEATH AND STILLBIRTH COMMISSION

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Submitted By:

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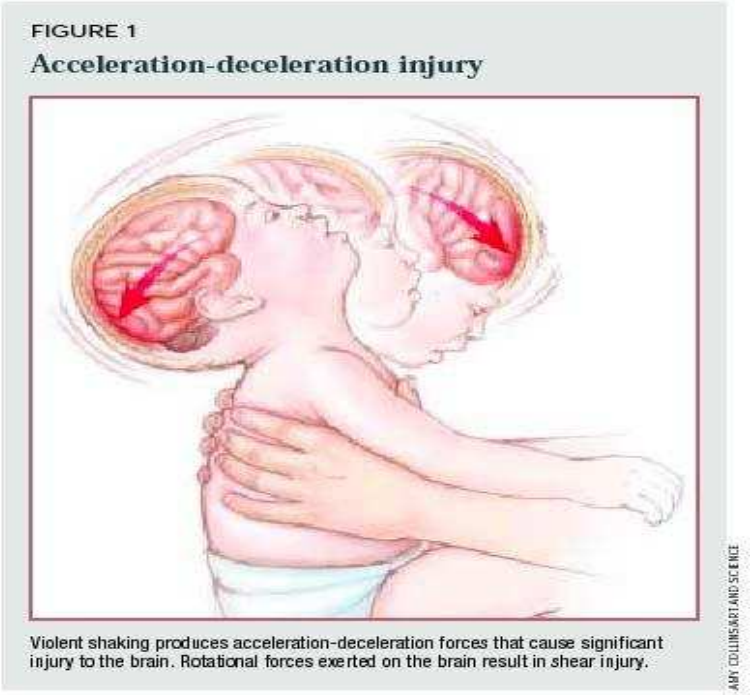
Coordinator


*"Care provides a conduit for our spirits expression in the midst of our social existence. The more we truly care, the more we'll come to know ourselves and others. Care provides the key to unlocking our potential and making it real." Doc Childre and Howard Martin*

**Introduction:**

Abusive head injuries, formerly known as Shaken Baby Syndrome is a trauma that occurs when a caregiver violently shakes an infant, which can also be associated with impact injuries, blunt force trauma and hypoxic and ischemic injury.(Figure 1) The clinical definition by the American Academy of Pediatrics (AAP) is as follows: " Shaken Baby Syndrome, or SBS, is a form of Abusive Head Trauma (AHT) that causes bleeding over the surface of the brain, swelling of the brain, bleeding at the back of the eyes, and other injuries not seen together in any other disease or medical condition".[1,2] This is a devastating form of child abuse, which occurs when an angry or frustrated caregiver shakes a baby, typically, in response to persistent, inconsolable crying. According to Deyo, et al, 21-74/100,000 children worldwide are victims' annually.[3] It is the leading cause of morbidity and mortality in infants and children and is most often seen in children younger than 2 years of age, with the average age of the victims being six months.[4,,5]




In 2008, the United States experienced 1,740 child fatalities from maltreatment. Of these fatalities, 50% occurred in children less than 1 year, and 80% in children less than four years of age. Further, 80% of the fatalities involved a parent as the perpetrator. [10] Among the children who survive, 80% will suffer brain injury, blindness, deafness, fractures, paralysis, seizures, cognitive and learning disabilities or cerebral palsy. It has also been estimated that 1,400 to 10,000 babies and children are shaken each year, with 25% dying from their injuries and 70% suffer with a range of brain injuries that can result in long-term disabilities.[6] The reason that there is such a large discrepancy in the estimated numbers is due to under reporting of abuse. Initial inpatient hospitalization costs have been estimated to be between $18,000 -$70,000/child, with ongoing medical costs exceeding $300,000/child. Many children require long-term health care management which could exceed 1 million dollars/child over

their lifetime.[7] Additional cost to society includes the loss of societal productivity and occupational revenue. Prosecution and incarceration of the perpetrator is also significant. These injuries and deaths are preventable by utilizing prevention campaigns and educational programs.

**Call To Action:**

From 2005 -2009 the state of Delaware had 13 cases of Abusive Head Trauma (AHT).[8] Based on this number and the dangers of AHT, Prevent Child Abuse Delaware (PCAD) submitted a grant proposal that was granted by Astra Zeneca and BarclayCard US to create a prevention program targeting the parents of newborn infants. In addition, Child Death, Near Death and Stillbirth Commission partnered with PCAD in this endeavor. A planning committee was formed and had their initial meeting in January 2009. The planning committee members are as follows:

- Karen DeRasmo: Executive Director PCAD
- Anne Pedrick: Executive Director CDNDSC
- Marjorie Hershberger: Program Coordinator and Instructor
- Karen Cooper: Information Technician for PCAD
- Kellie Turner: Program Director for PCAD

At this meeting the coordinator was charged with presenting to the planning committee several program options and to plan the process of the program implementation and evaluation of the program. At the meeting held on 2-23-09 the planning committee selected the Mark Diaz Model.[9] This program has been successful in Western New York and Pennsylvania. The program is targeted at parents at the time of birth. The core components of this program include information on AHT, and alternate responses to infant crying. Parents are asked to voluntarily sign a commitment statement which states they will not shake their infant. Follow up phone surveys are conducted 7 months after birth to assess parents recall of information. The study also did a comparison of AHT incidence before and after the study time period. Results from the phone surveys demonstrated that greater than 95% of parents recalled receiving information on AHT. Sixty nine percent (69%) of live birth parents signed the commitment statement. The most significant finding was that the incidence of AHT decreased by 49%. Several other educational programs support the success of parental educational programs.[10, 11]

The objectives for this program are as follows:

- State wide program. Abusive head injury education to be provided to all parents who deliver their infants in Delaware hospitals.
- The educational material will be presented at the time of birth, separate from other education.

- Material on AHT will be provided in the form of literature, visual, and verbal. The languages of English and Spanish will be used.

The goals of the program are as follows:

- To reach 90-95% of all newborn parents in state of Delaware.
- To decrease the incidence of AHT by 50%.
- Achieve a cultural change in understanding of early infant crying and its relationship to AHT.

**Implementation:**

This program targets nurses in hospital Obstetric (OB) and Neonatal Intensive Care Units (NICU). A 1 ½ hour training session was developed. The objective of the training for nurses included:

- Define AHT/SBS and understand that it is a preventable injury through a hospital-based educational program.
- State the six key elements of AHT/SBS program with special attention to crying behaviors and that crying and colic are normal.
- Describe how the nurse will educate infant caregivers on AHT/SBS and that crying behaviors is the most common stimulus for shaking.

The program was submitted to the Delaware Nurses Association (DNA) Continuing Educational Committee for approval of 1.2 contact hours. The DNA is an accredited approver by the American Nurses Credentialing Centers Commission on Accreditation. Access to hospitals was done by the coordinator, who contacted either the Director of Nursing or the head of the Nursing Educational Departments for the following hospitals.

- Christiana Care Health Services (CCHS)
- Bayhealth Medical Center
- St. Francis Hospital
- Nanticoke Memorial Hospital
- duPont Hospital for Children
- Beebe Medical Center

Training began in August of 2009 with CCHS followed by Bayhealth, since these are the largest delivering hospitals with approximately 10,000 births/year between the two. Training was done exclusively through the program coordinator so the message was consistent throughout the state. [App.1] Sessions were video recorded at all hospitals to address turn over in staffing. Hospitals were provided all material for the program free of charge and included the following:

- Video "Portrait of Promise": this is an 8 minute video of three families who have experienced AHT. It is to be viewed by all parents/caregivers of newborns, and is available in English and Spanish.

- Prevent Child Abuse Delaware brochure on AHT/SBS, also available in English and Spanish.[App.2]

- Posters for units with the AHT/SBS prevention message.

- Commitment Statements (CS): parents are asked to voluntarily sign the CS, which states that they have received and understood the information presented. The CS is produced in a triplicate format. The first copy goes the patient's medical record. In the event of an AHT/SBS case the CDNDSC will review the medical record and determine if a CS was signed. The second copy goes home with the parent/caregiver. The third copy goes to PCAD. A statement on the CS asks the caregiver if a representative from the program my call them in six weeks, to participate in a brief survey. All identifying information is blocked out on the third copy to be in compliance with HIPPA regulations.[App.3]

One-on-one discussion with a nurse is vital to the success of this program. A sample script was provided for nurses and requires no more than 5 minutes of their time. Nurses are also asked to document that education was offered.[App.4]

Addressed envelopes were provided to each hospital for each month of the year. At the end of the month, hospitals send the accumulated CS to PCAD and have been reimbursed for their postage, keeping the program completely free of charge to the hospitals in the state. PCAD Staff have been placing follow up telephone calls and asking parents/caregivers to complete a brief survey. This data will be used to help determine the effectiveness of the program.[App.5]

**Status of Program:**

As stated previously CCHS began its training in late August of 2009 and had three training sessions. They went live with the program on December 8, 2009. Bayhealth followed with Kent General and Milford Memorial Hospitals. The remaining hospitals followed. As of October 2010 all hospitals with OB and NICU's have received their training and have implemented the program. Approximately over 300 nurses were educated. To date over 12,000 CS and AHT/SBS brochures have been distributed to the above mentioned hospitals. To date 4,187 CS have been returned to PCAD. Five hundred and forty three (543) parent follow up telephone calls have been made with 233 parent surveys completed. Fifteen parents of 6.4% of the total participants did not watch the DVD "Portrait of Promise". Remaining data from the follow up surveys still need to be processed. In addition to hospital education, the program coordinator had done two presentations on AHT/SBS for the DAPI program, which were well received.

**The Plan Forward:**

As stated previously remaining follow up survey data needs to be summarized. The program coordinator does follow up with each hospital every 6 months to assess how the program is progressing. She is available as a resource and additional training, if requested. Additional training requests have come from two hospitals for their Emergency Departments. The planning committee needs to determine the next phase of this program in regards to community outreach. The program could easily be adapted for use in schools, child care, babysitter course, etc.

It is hoped that when enough data had been collected this data can be published. In addition, assessment of reported AHT/SBS cases starting from October 2010 will determine if the incidence of AHT/SBS has decreased. CDNDSC will also cross-reference all incidences of AHT with the CS's sent to PCAD to determine effectiveness of program.

**Conclusion:**

The Delaware AHT/ABS Prevention and Awareness Program has been a wonderful experience for me personally. The goal of reducing the incidence of AHT/SBS is not an undertaking that can be done in isolation, but requires the entire community to step forward and care for our most precious resource, our children. It has been a privilege to work with the numerous caring individuals throughout the state. A special thank you to Karen Cooper for all her hard work and assistance in helping provide whatever I needed as I traveled around the state. Thank you to the planning committee and to the support from Astra Zeneca, BarclayCard US and CDNDSC. I look forward to continuing this important work.

When I look back over the past year and a half, and what PCAD has been able to accomplish I am reminded of the quote from Margaret Mead, *"Never doubt that a small group of thoughtful, committed citizens can change the world: indeed, it is the only thing that ever has".*

**References:**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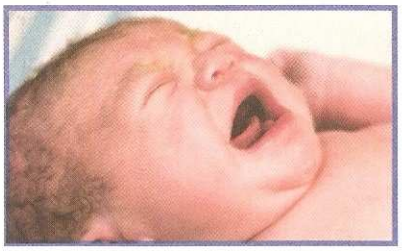
## Appendix



Prevent Child Abuse Delaware

# Crying – It's a baby's job!

**It is a baby's job to cry. Maybe the baby is hungry, the diaper is wet, or the child wants to be held. Occasionally your child might have a cry of pain. Sometimes nothing seems to stop the crying.**

**So, it is a baby's job to cry. It seems like some do it too well!**

- It is normal for babies to cry – sometimes for 3 or more hours a day.
- Babies usually cry more often in the evening.
- Crying may come and go for no reason.
- Crying usually is not a health problem, unless someone gets angry at the baby and hurts him/her.
- Crying slows down after 3 or 4 months in most babies.

**Things for you to check:**

- Is your baby hungry?
- Is your baby in pain?
- Does your baby need a diaper change?
- Does your baby want to be held?

**If none of that seems to be the problem:**

- Relax - your baby will be okay.
- Have someone else watch your baby for a while if it is bothering you too much.
- Put your baby down in a safe place and go to the next room. Check your baby every 10 minutes to see if there is anything you can do; but if not, your baby will be okay.
  - Exercise
  - Listen to music.
  - Call a friend, relative, or a parenting helpline.
- Call your doctor if you are stressed and need help.

**Don't give up, it gets better.**

Child Death, Near Death, and Stillbirth Commission
"Every child deserves a tomorrow"

CALL

Childhelp
National Child Abuse Hotline
1-800-4-A-CHILD

for emergency assistance

For Additional Information
Call Prevent Child Abuse Delaware
(302) 425-7490

These materials developed by Georgia chapter, American Academy of Pediatrics and Prevent Child Abuse Georgia.
We thank the Georgia chapter for the use of these materials.

***Delaware Shaken Baby Syndrome Prevention and Awareness Program***
*"Saving babies' lives one family at a time."*
***Programa de Delaware para evitar el Síndrome de Niños Sacudidos y dar mayor conciencia a ello***
*"Salvando la vida de los niños familia por familia."*

Prevent Child Abuse Delaware

# VOLUNTARY COMMITMENT STATEMENT
## *(DECLARACIÓN VOLUNTARIA DE COMPROMISO)*

Child Death, Near Death, and Stillbirth Commision

**Hospital/Birth Center Instructions: Complete one form for each infant. Provide parent(s) with information about Shaken Baby Syndrome and prevention measures. Request that they voluntarily sign this form indicating that they have received and understand the information. Provide the parents with one copy of this signed form, retain one copy in the mother's medical record, and forward one copy to the Delaware Shaken Baby Syndrome Prevention and Awareness Program.**
*Instrucciones para el hospital/centro de parto: Llene un formulario para cada bebé y proporcione a los papás información sobre el Síndrome de Niños Sacudidos y medidas para evitarlo. Pida que firmen este formulario de manera voluntaria para indicar que han recibido y entendido la información. Además, entregue una copia del formulario firmado a los padres, coloque una en el archivo médico de la mamá y envíe una copia al Programa de Delaware para evitar el Síndrome de Niños Sacudidos y crear mayor conciencia a ello.*

**HOSPITAL NAME:** _____
***(NOMBRE DEL HOSPITAL)***

**BABY'S LEGAL NAME:** _____
***(NOMBRE LEGAL DEL NIÑO)***

**DATE OF BIRTH:** _____ **SEX:** M ❑ F ❑
***(FECHA DE NACIMIENTO)*** (MM/DD/YY) (MM/DD/AA) ***(SEXO)***

**PARENT(S) PROVIDED SHAKEN BABY SYNDROME INFORMATION, DATE:** _____
***(EL PADRE O LOS PADRES RECIBIERON LA INFORMACIÓN SOBRE EL SÍNDROME DE NIÑOS SACUDIDOS, FECHA)*** (MM/DD/YY) (MM/DD/AA)

❑ **Discussed with Nurse** ***(Habló con la enfermera)***
❑ **Viewed Video** ***(Vio video)***
❑ **Received Brochure** ***(Recibió folleto)***

**NOTES:**
***APUNTES:***

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**Parent: Information about Shaken Baby Syndrome has been presented to me by the hospital. I voluntarily sign this statement acknowledging that I have received, read and understand this information.**
*(Padre/Madre): Personal del hospital me ha proporcionado información sobre el Síndrome de Niños Sacudidos. Firmo de manera voluntaria esta declaración para confirmar que he recibido, leído y entendido la información.*

**SIGNATURE, MOTHER:** _____ **REFUSED:** ❑ **DATE:** _____
*(FIRMA, MADRE)* *(NO ACEPTÓ)* *(FECHA)*

**SIGNATURE, FATHER:** _____ **REFUSED:** ❑ **DATE:** _____
*(FIRMA, PADRE)* *(NO ACEPTÓ)* *(FECHA)*

**SIGNATURE, OTHER:** _____ **REFUSED:** ❑ **DATE:** _____
*(FIRMA, OTRO)* *(stepparent, adoptive parent, legal guardian, legal custodian)* *(NO ACEPTÓ)* *(FECHA)*
*(padrastro, madrastra, padre adoptivo, tutor legal, guardián legal)*

**May a representative from Delaware Shaken Baby Syndrome Prevention and Awareness Program call you in 6 weeks to participate in a brief survey?**
*¿Está bien que un representante del Programa de Delaware para evitar el Síndrome de Niños Sacudidos y dar mayor conciencia a ello lo contacte por teléfono en 6 semanas más para que usted participe en una breve encuesta?*

**Telephone number** ( ) _____ **Distribution:**
***(Número de teléfono)*** ***Distribución:***

**White Copy - Mother's Medical Record** *Copia Blanca - Archivo Médico de la Mamá*
**Yellow Copy - Parent's copy** *Copia Amarilla – Para los padres*
**Pink Copy – Prevent Child Abuse Delaware** *Copia Rosada – Para ser entregada a Prevent Child Abuse Delaware*

**Preventing Abusive Head Injuries**

**Through Hospital-Based Parent Education**

**The Delaware SBS Prevention & Awareness Program**

Outline

Speaker: Marjorie L. Hershberger, MS, RN-BC, PNP-BC, CPNP

1. Welcome & Introductions
2. Objectives
3. Abusive Head Injuries/Shaken baby Syndrome: A preventable problem
    a. SBS prevention program: Research and results
    b. Regional programs and results
4. Implementation
    a. Six key elements of SBS program
    b. Assistance with implementation
    c. Roadblocks to effective implementation
5. Abusive Head Trauma vs. SBS
    a. Definition
    b. SBS Nomenclature
    c. Incidence of SBS
    d. What is the cause?
    e. Unique injuries of SBS
    f. Consequences of SBS
6. Risk Factors
    a. Perpetrators
    b. Relationship of perpetrator to victim

7. Who Does SBS Affect?

    a. Child victim

    b. Whole family including siblings

    c. Investigative team

    d. Healthcare providers

    e. Perpetrator

    f. Society

8. How can we educate?

    a. One-on-One discussion with nurse

    b. Crying facts and what to do and not do

    c. Opportunity to see “Portrait of Promise” video

    d. Shaken baby syndrome educational brochure

    e. Commitment statement

9. Does parent participation make a difference?

    a. Relative risk of not signing a commitment statement

10. Delaware’s SBS Prevention & Awareness Program

11. Questions and Answers

12. Evaluation

## Script for Nurse to Parent on Abusive Head Trauma

*(This is an example of a script that you can use to talk with parents/support person concerning Shaken Baby education.)*

"To prepare you for discharge, I would like to discuss with you some of the normal developmental behaviors you can expect to see in your newborn over the next several months.

Your baby has 4 jobs: eat, sleep, soil their diaper and cry. I want to take a few minutes to discuss the most frustrating piece of the 4 jobs: crying! As your baby grows the frequency, length and strength of their cry will change too. Crying usually peaks at 7-8 weeks of life. These crying behaviors can be unpredictable, last longer than 45 minutes at at time, be resistant to soothing, often occur in the late afternoon, early evening, and the infant can have what appears to be a painful facial expression. Remember that it is an infant's job to cry and it doesn't mean that you are a bad parent if you are unable to soothe your infant.

Let's talk about some ways that you can try to soothe your infant. First, make sure all of your infant's needs are met: full belly, dry diaper, not wet, cold or hot, and no signs of illness. Try to soothe your infant with swaddling, signing, swinging the infant in a infant swing, or sucking on a pacifier. If you have done all of the above and your infant still is crying, put the infant in a safe place (like their crib) and WALK away. Go somewhere, calm down, regroup and go back in 5-15 minutes and check on the infant. Never hold your infant when you are angry. You are not a bad parent if you put your infant down in a safe place and walk away when you are frustrated. Also, remember to talk to your day care provider and baby sitter about the crying behaviors and that it is ok to call you if they are getting frustrated.

Now, I would like to show you a video that will show you 3 families that have been permanently affected by the effects of Shaken Baby Syndrome. It may be upsetting to watch, but the message is very important".

*Remind the parents that this education is mandatory and is being provided to ALL parents in all delivering hospitals in DE.*

**Prevent Child Abuse** Delaware
Member Agency of the United Way of Delaware

***Delaware Shaken Baby Syndrome Prevention and Awareness Program***
***6 Week Follow-Up Parent Survey***

**Interview Date** _____

**Survey Participant** _____
**(Last Name)** **(First Name)** **(Middle Initial)**

**Address** _____
(Street) (City) (State) (Zip Code)

**Telephone #** _____ **Home □ Cell □ Work □**

**Child/Children Date of Birth** _____

**Age** _____

**Ethnicity** Caucasian □ African-American □ Hispanic □ Asian □ Other □

**Interviewer's Signature** _____

1. Do you remember a nurse talking to you about Shaken Baby Syndrome after you had your child? Yes □ No □

2. Did you view "Portrait of a Promise:Preventing Shaken Baby Syndrome" while in the hospital? Yes □ No □

   Was the video helpful? Yes □ No □

   Was the video confusing? Yes □ No □

   Did the video teach you about normal infant crying? Yes □ No □

3. Have you been frustrated by the crying of your baby? Yes □ No □

   If "Yes," explain: _____

4. What resources do you use when you feel frustrated?

_____

_____

5. Did you find the literature about Shaken Baby Syndrome and baby crying helpful? Yes ☐ No ☐

6. What soothing techniques do you use to calm your baby?

_____

_____

_____

7. Who do you trust to help with caring for your baby?

_____

_____

_____

***Interviewer should read the following to the survey participant:***

Remember that all babies cry – that's how they communicate.

The average newborn cries 2 hours per day.

Crying increases to 3 hours per day by 2 months of age.

Babies may cry even when fed, dry, and soothed.

Babies usually cry more in the evening.

Here are some things that you can do when your baby cries:

- Pick up your baby and hold close to you; hum or sing to your baby.
- Check if baby needs to be changed, fed and/or burped.
- See if baby is too hot or too cold.
- Swaddle your baby.
- Rock gently or use a baby swing.
- Offer baby something to suck (finger, pacifier).

If the crying is getting to you, it is OKAY to place your baby – face up – in the crib and walk away for 5 or 10 minutes. Find someone to talk to and calm down. Then go check on your baby.

Call your doctor if you are stressed and need help.