



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

**REPORT OF THE SAFE SLEEP PRACTICE SUBCOMMITTEE FROM 2006 – 2010**

Submitted By:

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## Infant Safe Sleep

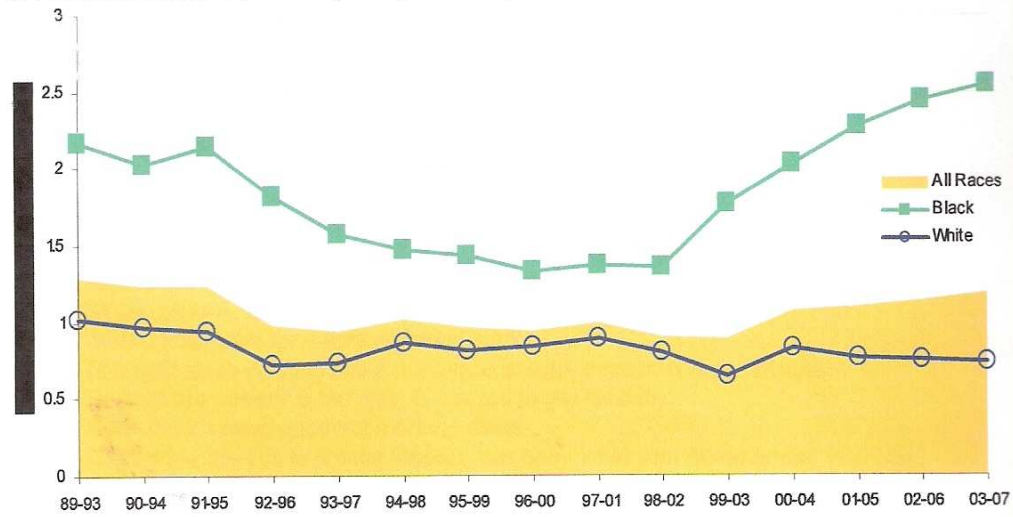
### **Background:**

Delaware has had a higher infant mortality rate (IMR\*) than the rest of the United States for several years. The top three causes of infant mortality in Delaware are Prematurity, Congenital anomalies, and unsafe infant sleeping. In the 2008 Kids Count in Delaware, Delaware ranked 5<sup>th</sup> out of 50 states for infant mortality, with a rate of 9.2/1,000 live births from 1999 to 2003.<sup>1</sup> In 2005, Delaware's IMR was 9/1,000 live births, remaining in the 5<sup>th</sup> ranking spot.<sup>2</sup> In the Every Child Matters report from April 2008 Delaware ranked in the bottom 10 of the 50 states for infant mortality. They state that "children born in the bottom 10 states are 70% more likely to die before their first birthday than children in the top 10."<sup>3</sup> Infant deaths that happen during sleep occur largely during the postneonatal period or between one month and one year of age. According to the Child Death, Near Death and Stillbirth (CDNDSC) fiscal year 2003 to fiscal year 2010 report, infants from 0-3 months of age have the highest number of SIDS and Asphyxia deaths.<sup>App1</sup> In the Delaware Health Statistics Center Statsheet, published by the Division of Public Health Department of Health and Social Services, Delaware had an average of 99 infants die under the age of 1 year between 2003 and 2007. Fourteen of those infants were SUID cases. Preventing those deaths would have reduced Delaware's overall IMR approximately 14%, to 7.3<sup>4</sup> The CDNDSC report from fiscal year 2003 to fiscal year 2010 shows 85 reviewed sleep-related deaths. The three top factors related to the deaths include, not in a crib or bassinette, sleeping with other people and not sleeping on back.<sup>App1</sup>

*\* Infant Mortality Rates represent the number of deaths under one year of age per 1,000 live births.*

Prevention of sleep related deaths has a large potential to impact the overall mortality rate. Since 2000, Delaware has had more than 128 Sudden Infant Death Syndrome (SIDS) and Sudden Unexpected Infant Deaths (SUID) deaths. Infant mortality rates for African America infants in Delaware is three times that of Whites (16.7/1,000 vs. 6.9/1,000)<sup>5</sup>. This disparity remained in the 2008-2009 data which showed 12 sleep related deaths for black, African American vs. 5 for White. These rates suggest a need for a change in prevention strategies.

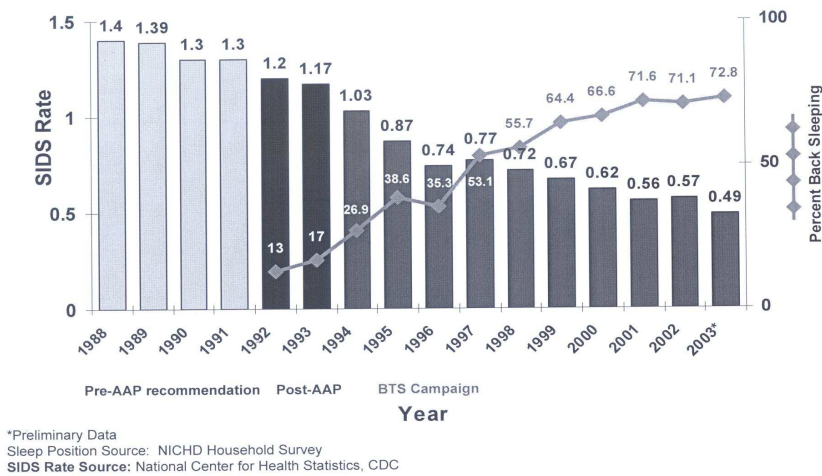
Figure 3. Five-year Average SUID IMR by Race, Delaware, 1989-2007



Source: Delaware Health Statistics Center

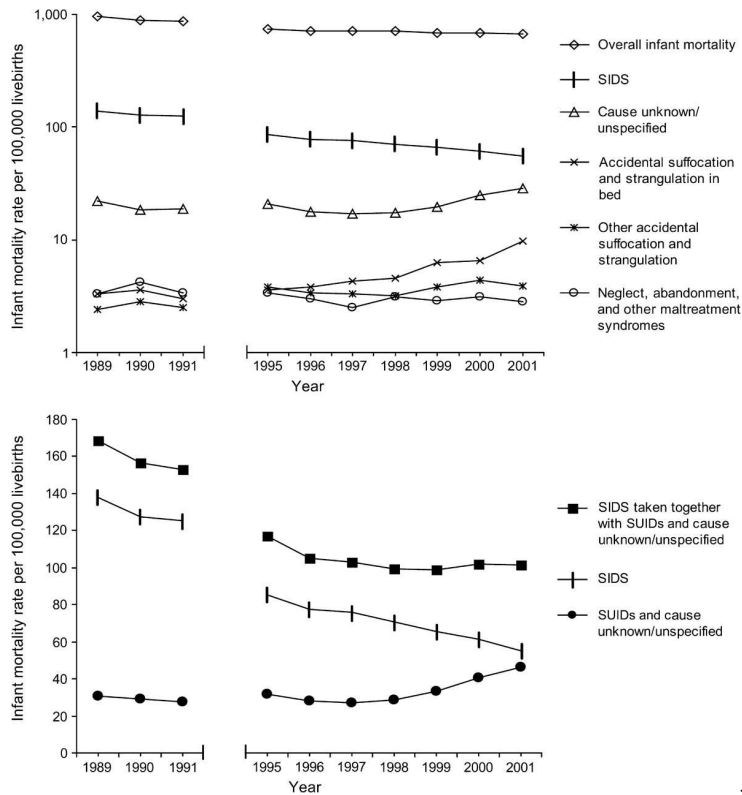
Historically SIDS has been considered unpreventable. However, after research that was conducted in the late 80's and early 90's it became apparent that a number of these deaths could be prevented by practicing risk reduction methods. In 1992, the American Academy of Pediatrics (AAP) announced its recommendations for how infants should be placed to sleep. These recommendations were updated again in 1996. In 1994, the "Back to Sleep" campaign was initiated throughout the United States. This was in collaboration with the National Institute of Child Health and Human Development, the AAP, Association of SIDS and Infant mortality Programs and SIDS Alliance. Since 1994, the nation has seen a dramatic drop in SIDS death rate, 1.3/1,000 live births in 1991 to 0.49/1,000 live births in 2003. This is the most significant decrease in infant mortality over the past 16 years in the United States.

**SIDS Rate and Sleep Position, 1988-2003**  
(Deaths per 1,000 Live Births)



Since this last published data there has been an improvement in death scene investigation, providing better information about how these infants died. This has resulted in a shift in the Diagnostic Coding for Cause of Death (COD). Sudden Unexpected Infant Death (SUID) is defined as an infant death that occurs suddenly and unexpectedly, and whose manner and cause of death are not immediately obvious prior to investigation.<sup>6</sup>

The definition of SIDS has become more focused and is defined as, the sudden death of an infant younger than 1 year of age that remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the death scene, and a review of the clinical history. It is a diagnosis of exclusion, when no other anatomical cause can be identified.<sup>7</sup> A study done by Shapiro-Mendoza, ET al.<sup>8</sup> determined that the decline in the SIDS rate was offset by an increase in the rate of other SUID's and cause unknown/unspecified. The absolute SIDS rate declined by 15.7 deaths/100,000 live births while cause unknown/unspecified and accidental suffocation and strangulation in bed (ASSB) rate increased by 11.2 and 5.1 respectfully.



Shapiro-Mendoza, C.K. et al. *Am. J. Epidemiol.* 2006  
163:761-769.

In the Archives of Pediatrics and Adolescent Medicine, a study done by Colson, et al<sup>9</sup>, in 1999 found that placing babies in adult sleep environment placed them at high risk for suffocation or strangulation and caregivers were not aware of the hazards. The Consumer Product Safety Commission (CPSC) issued an advisory warning as well as the American Medical Association (AMA). The AMA stated that caregivers should be informed of these dangers and avoid those habits that place infants at risk.<sup>10</sup>

In 2000, the AAP Task Force on Infant Sleep Position and SIDS released its policy statement: Changing Concepts of SIDS; Implications for Infant Sleeping Environment and Sleep Position.<sup>11</sup>

The recommendations related specifically to the infants sleep environment and included:

- Adult sleep surfaces do not meet safety standards for infants and have the additional risk of entrapment.
- Infants should not be placed on soft surfaces to sleep.
- Soft material in the infants sleep environment should be avoided.
- Bed sharing may be hazardous.

In 2002, the CPSC, JPMA, and SIDS Alliance joined in a new national infant safe sleep campaign; however, this campaign was only directed at retailers. In a study done by Scheers<sup>12</sup>, and published in

Pediatrics it was calculated that the risk of suffocation was 40 times higher for infants who were placed in adult beds to sleep as opposed to cribs. National findings are consistent in the findings that the most frequent cause of suffocation is from wedging between a bed or mattress and a wall and oronasal obstruction. This results from the infant becoming wedged between mattress, wall or headboard and they asphyxiate. Infants can also fall from beds and couches onto surfaces such as clothing, which then causes suffocation. Surfaces of adult beds, waterbeds, couches, and chairs are soft and can suffocate infants who are placed on their stomachs or sides and roll onto their stomachs. Finally, infants sleeping with adults or other children can have their airway blocked when they are accidentally overlaid.

### **Call to Action**

From 2003 -2007, the State of Delaware had 57 infant and child sleep related deaths.<sup>4</sup> As a result the Infant Safe Sleeping Practice Subcommittee was created in May 2006 under the direction of Delaware's Child Death, Near Death and Stillbirth Commission (CDNDSC) and the Child Protection Accountability Commission (CPAC). The subcommittee was given the directive to, "evaluate programs, task forces and educational awareness campaigns around safe sleeping practice education in Delaware and make recommendations for creation, improvement or merging of initiatives to address the current number of SIDS deaths with sleeping practice factors."<sup>13</sup>

The first meeting was held in June 2006 with nine members representing a multi-disciplinary effort. The services represented included: Delaware health and social Services (DHSS), Division of Public Health (DPH), Division of Family Services (DFS), Office of the Child Advocate (OCA), Department of Education (DOE), CDNDSC, Medical, Nursing, and the Delaware SIDS Affiliate.

Discussion occurred around what already existed in Delaware and current activities surrounding this issue. While it was evident that information on SIDS and safe sleeping environment was available, there was no central coordination surrounding these efforts. The committee had several questions which included:

1. What organizations have what information and who is responsible for what?
2. What type of information is available, what populations are receiving it but not utilizing it, and what populations are not receiving any information at all?

The following recommendations were presented to the joint commissions in October 2006 and are as follows:

1. Recommend that the DSCYF include safe sleeping practices education as part of the Department's core curriculum for foster care training.
2. Recommend that DPH, through the SIDS Coordinator, develop a Safe Sleeping Practices website. This website should include a preventative message as well as links to other state and national organizations that promote the health and well-being of infants.

3. Recommend that Christiana Care Health Systems develop another safe sleeping practices billboard.
4. Recommend that the Center for Maternal and Child Health Epidemiology include, as part of its statewide educational campaign on improving birth outcomes, safe sleeping practices information, and specifically target the information to minority communities. To achieve this goal, the Center should coordinate outreach efforts with community organizations such as, but not limited to, the DE SIDS Affiliate, SIDS Alliance of the Mid-Atlantic, Nemours Health and Preventive Services, Christiana Care Health Systems and other hospitals, the Bayard House, Ministry of Caring, Delaware Ecumenical Council, and other similar organizations.
5. Recommend that Nemours Health and Preventive Services serve as the coordinating agency for educational campaigns in Delaware on safe sleeping practices.

At the meeting of the joint Commissions in October 2006, the subcommittee was asked to expand its work. The committee was asked to develop action steps for each of the recommendations and report back to the commissions. The committee reconvened and re-worked the recommendations into an Action Plan with rationale. Following are the action steps and rationale for each of the original six recommendations that were presented to the joint commission in May 2007 and then updated in May 2010.

1. **Recommendation:** Under the need for Office of Child Care Licensing and DFS having the most updated information available on safe sleeping practice as part of the department's core curriculum for foster care training and childcare providers.

**Rationale:** This recommendation comes from research that shows 15-20% of SIDS occurs in childcare particularly in the first week of care, due to unaccustomed prone position.

**Action & Follow-Up:** Safe Sleeping Practices are embedded in the new Center Regulations and will be incorporated into the family care regulations. The Office of Child Care Licensing (OCCL) Director is now a subcommittee member. Training around this issue continues with centers and family daycares. OCCL, an active subcommittee member, will continually email providers with recall notices and best practices surrounding infant safe sleeping.

**Status:** Accomplished

2. **Recommendation:** Safe sleeping practices website should be developed and include links to other states and National organizations that promote health and well being of infants.

**Rationale:** This recommendation addresses the available avenues of communication and a means to reach a wide range of the population with education and prevention messages utilizing the technology available to us.

**Action & Follow-Up:** CDNDSC, DE SIDS Affiliate, and the Division of Public Health will work together to develop the safe sleeping practice website page.

**Status:** While the CDNDSC website does have some information on safe sleeping a formal website has not been accomplished due to budgetary constraints.

3. **Recommendation:** Development of statewide hospital education campaign for safe sleeping practice for Pediatric Healthcare Providers.

**Rationale:** This recommendation comes from the research that shows parents copy what they see healthcare professionals do in the care of their patients. In order to be effective with the safe sleeping practice message it is important that healthcare professionals not only know the recommendations but practice and teach them. A survey on NICU nurses showed that 38% of nurses advised that it was all right to position an infant on their side.<sup>14</sup> (Adv. Neonatal Care 2006).

**Action & Follow-Up:** CCHS and DHC have hospital policies on infant sleep position. Further assessment of other state hospitals will need to be made.

**Status:** Accomplished and on-going.

4. **Recommendation:** The Center for Maternal and Child Health Epidemiology and the Delaware Healthy Mother Infant Consortium (DHMIC) should include, as part of its statewide educational campaign on improving birth outcomes, safe sleeping practices information, and specifically target that information to minority communities. To achieve this goal, the Center should coordinate outreach efforts with community organizations such as, but not limited to, the DE SIDS Affiliate, SIDS Alliance of the Mid-Atlantic, the Resources Mothers Program, Nemours Health and Preventive Services, Christiana Care Health Systems and other hospitals, the Bayard House, Ministry of Caring, Delaware Ecumenical Council, and other similar organizations.

**Rationale:** This recommendation was again believed to have a potential impact on improving birth outcomes.

**Action & Follow-Up:** FIMR staff will bring this issue to the Education and Prevention DHMIC Community Action Team.



**Status:** DHMIC and CDNDSC collaboratively distributed posters to educate the public about infant safe sleeping. This remains a topic for discussion and action at the DHMIC Data and Scientific Subcommittee.

5. **Recommendation:** Campaign for Cribs program: This recommendation came about as the FIMR community action teams are directed to study the National outcomes of such programs. If successful Delaware could develop a model program of its own.

**Rationale:** Research has proven the success of the Cribs for Kids program nationwide.

**Action & Follow-Up:** The subcommittee is looking into what public health crib availability there is for the state.

**Status:** Successful launching of Delaware Chapter of Cribs for Kids. Accomplished and on-going.

6. **Recommendation:** The CDNDSC legislative subcommittee should research state SIDS/Safe Sleeping Practices legislation and, if necessary, report to the CDNDSC by April 2007 or earlier with proposed legislation to be implemented in Delaware.

**Rationale:** This recommendation was based on the literature that shows that childcare providers are more likely to place infants supine if there is a regulation or written policy in place. States with regulation or legislation re: sleep position in childcare has increased from 7 to 49 since 2001.

**Action & Follow-Up:** The CDNDSC legislative subcommittee will revisit this issue once the subcommittee reconvenes.

**Status:** At this time, the recommendation has been put on hold due to recent implementation of the Abusive Head Trauma Program statewide at all birthing hospitals.

### **Action Steps**

The subcommittee first focused on identifying the stakeholders and expanding the committee makeup to include these entities. Added to the committee were Nemours Health and Prevention, Delaware chapter of the AAP and the OCCL. Starting in 2007 the following activities have been undertaken by the Safe Sleeping Subcommittee.

1. State wide educational campaign
  - a. A \$10,000 grant was awarded to the Safe Sleeping Practice Subcommittee from the DE SIDS Affiliate. The focus of the campaign

was on utilizing public media avenues. The committee worked with a marketing service to develop a safe sleep message that could be used with the DART transportation system. Two posters were created. One that measured 30" x 96" and was placed on the outside of twenty DART buses. A more detailed safe sleep message was placed on the interior of all DART buses measuring 11"x28". The DART campaign was coordinated with a media release and PSA's. This campaign also resulted in a radio interview with CDNDSC Executive Director on B101 for their Women's file on safe sleeping practices.

- b. The media message was resized to a smaller poster and 4,000 of these posters were distributed throughout the state including licensed child care centers, physicians' offices, clinic, etc. This was done in collaboration with Public Health and DHMIC.
2. The subcommittee was asked and contributed to the re-drafting of the unsafe sleeping section of the Maternal Child Health National Data Tool. This instrument allows child death review teams to document risk factors involved with SIDS/SUID deaths.
3. The subcommittee provided current safe sleeping recommendations that were in need of updating for the "Growing together Calendar". The calendar is distributed to all mothers after birth, at the time of discharge from the hospital.
4. The subcommittee has participated in many statewide health fairs since 2007 including, but not limited to: BayHealth Baby Fair, Westside Health, "Healthy Women Build Strong Communities, Kids Safety Day presented by A.I. duPont Hospital for Children, Community Health Fair/Boscov's Dover, Beautiful Gate Outreach Center, 2<sup>nd</sup> Chance Consignment Resale, and West End Health Fair at Howard High School. The focus of the subcommittees work at these fairs is to provide education and written materials on safe sleeping practices to women/families.
5. Educational materials on safe sleeping practice were provided to the Safety Store at A.I. duPont Hospital for Children. CDNDSC also recommended that the Baby Store at Bayhealth Hospital have educational materials available as well. This was accomplished.
6. CDNDSC contracted with a specialist for infant safe sleeping and SIDS. This individual has lectured to numerous licensed daycare providers and has provided training through-out the state with over 200 individuals educated, including not only daycares, but DFS, foster care, DAPI<sup>5</sup>, etc.

7. At the 2008 and 2010 “Protecting Delaware’s’ Children Conference, lectures were presented on Safe Sleeping Practice and the CDC’s SUID Investigation protocol and recommendations.
8. The Safe Sleep Specialist (SSS) in cooperation with Nemours Health and Prevention Services and the Delaware chapter of the AAP conducted a teleconference for Delaware pediatricians and family practice physicians on safe sleeping practices with 1 CME credit awarded.
9. The SSS also met with A.I. duPont Hospital for Children to develop and implement a mandatory education on safe sleep practices. These included:
  - a. Safe sleeping education utilizing the NIH educational program entitled, “The Continuing Education Program on Sudden Infant Death Syndrome (SIDS) Risk Reduction”<sup>15</sup> at orientation for every new nurse that is hired.
  - b. Mandatory safe sleeping education for all nurses via the hospitals annual education blitz program.
  - c. New teaching record on safe sleeping practices for nurses to complete with families who have infants admitted to the hospital.
  - d. Safe sleeping practice was incorporated into age specific competencies that all clinical associates are required to take yearly. This started in 2009.
10. An article entitled “We Need to Teach More Than Back to sleep” was written and published for the 2008 fall Delaware chapter AAP newsletter.
11. Lectures for the University of Delaware graduate nursing practitioner program were given in 2008 and 2010.
12. Invitation to be keynote speaker at “Conference By the Bay” in April 2009. Lecture: “The Key to Infant Safe Sleep”. This conference targets nurses and nursing students.
13. Lecture on safe sleeping practice to community via DelMarva health Ministries.
14. Media campaign in October 2009, for National SIDS Awareness month. The campaign utilized billboards throughout the state to deliver the message on a safe sleep environment. This was done in collaboration with A.I. duPont Hospital for Children and the Delaware SIDS Affiliate. CDNDSC utilized billboards in 2010 for state-wide education during October and November.

15. Lecture for Pediatric Grand Rounds at CCHS on, "The Key to Safe Sleeping Practices".
16. News articles on safe sleeping published in the News Journal and the Delaware State News, as well as interview of CDNDSC Executive Director and the Safe Sleep Specialist.
17. Responded to advertisements in News Journal that does not support the AAP recommendations for infant safe sleeping.
18. Contributed to new policy for the NICU at CCHS, where multiples are no longer co-bedded.
19. One of the largest projects that the subcommittee has successfully undertaken is the development of the Delaware chapter of Cribs for Kids. This program launched on October 29, 2009 in partnership with CDNDSC, Nemours Health and Prevention Services for the Nemours Foundation, and the Division of Public Health. "Cribs for Kids", is a national program that was started in 1998. It currently has 266 partner programs in 44 states. The purpose of this program is to provide cribs (Graco Pack N Play) and educational materials regarding safe sleeping and other important safety tips. Criteria to receive a free crib include the following: not able to purchase a crib by any other means, due to deliver the baby in six weeks, or an infant that is less than six months of age. Referrals are made to A.I. duPont Hospital Children who assesses the individual's qualifications. The Division on Public Health is notified and delivers the crib and fitted sheet directly to the parents' home, and demonstrates how to set up the Pack N Play. The caregiver must in return demonstrate the crib set up. The Public Health Nurse also provides education on safe sleeping practices that is standardized throughout the state. This is an evidence-based program that has had very good outcomes in reducing infant unsafe sleeping deaths. Delaware is currently the only state that has the public health nurse make a visit to the home. Many experts in the field believe that Delaware has set the "Gold Standard" for this program by providing that home visit. It was anticipated that 75-80 cribs would be distributed during the first year. During Fiscal Year 2010, over 120 cribs have been delivered and education provided. A review of the CDNDSC deaths records demonstrate that of all the infants who received a crib not one died from unsafe sleep practices.
20. A brochure was developed for the Faith Community on Safe Sleeping Practices for the Delaware Ecumenical Council of Delaware.

21. A cookbook entitled “Delicious Delaware” was developed by the subcommittee to raise funds for the “Cribs for Kids” Delaware Chapter and will be on sale mid November 2010.
22. Lecture given to CCHS SANE<sup>6</sup> nurses who asked the subcommittee to help them develop and implement an Infant Safe Sleep Program for the Emergency Department. This is will start in October 2010.
23. A survey was conducted at the BayHealth Baby Fair highlighting community knowledge and beliefs about infant sleeping practices. This will be utilized in a future article.
24. Planning of a “Stroller Walk” to raise funds for the “Cribs for Kids” Delaware chapter is under way for April 2011.
25. Working with other entities to share the Safe Sleep message, such as having the safe sleep poster on websites, i.e., 2<sup>nd</sup> Chance Children’s Resale (2ndchancechildrensresale.com).

### **The Plan Forward:**

In 2010, the subcommittee formally revised its mission statement and identifies goals that better reflect the subcommittees’ activities. The revised mission statement is as follows:

*“To reduce the number of SIDS, SUID deaths in the state of Delaware through educational awareness campaigns around safe sleeping practice.”*

The Safe Sleeping Practice Subcommittee will now be known as the Infant Safe Sleeping Practices Community Action Team. It will be an ongoing committee with meetings at least 6 times per year. The goals of the team are as follows:

1. Expand message from “Back to Sleep” to Safe Sleep Environment. That will include all of the AAP task force recommendations on Safe Sleep Practices.
2. Reinforce message wherever and whenever possible.
3. Message needs to be consistent and make sense to the lay public.
4. Message needs to address parental desire to keep baby safe and comfortable.
5. Message needs to emphasize parent self-efficacy and the “preventability” of infant unsafe sleeping death.

## **Summary:**

Much has been accomplished since the safe sleep subcommittee started in 2006 however, much more still needs to be done. The State of Delaware continues to have a large number of sleep related infant deaths. We must look to other avenues to get this very vital message to parents. It is important to continually disseminate this to the public, or else they will not perceive it as a problem. We must do better at addressing the racial disparity that exists in the state by going directly into the areas that show a high density of infant sleep related deaths, to determine if they are getting the message, and if so, why they are not practicing it.

All of this work cannot be done in isolation or without funds to support it. It is said that the way to determine the values of a society is to look at how it cares for its young and most vulnerable citizens. The joint CPAC/CDNDSC commissions have the foresight to see that if we do not intervene, the high IMR will continue, and this can eventually have significant impact to our society as a whole. The Infant Safe Sleeping Community Action Team is committed to continue its work to “spread the word” and invites anyone with interest and a desire to take action to join us.

In writing this report, I admitted that I have most likely left out a lot of activities that the committee members have accomplished. I offer my sincere apologies if I have forgotten anyone or anyone’s activities over the four years of the committees work.

## **References**

1. Kids Count in Delaware Families Count in Delaware Fact Book 2008. Center for Community Research and Service. College of Human Services, Education and Public Policy. University of Delaware, Newark, DE. <http://www.ccrs.udel.edu/kids-count-delaware-families-count-delaware-fact-book-2009>
2. United States Census Bureau Infant Mortality Rate 2005. <http://www.census.gov/statab/ranks/rank17.html>
3. Geography Matters Child Well-Being in the States. Every Child Matters Education Fund 2008. Washington, DC. <http://www.dhss.delaware.gov/dhss/pressreleases/2008/infantmortalityrate-09-1108.html>
4. Delaware Health Statistics Center Statsheet. 2010. Division of Public Health Department of Health and Social Services. <http://www.everychildmatters.org/storage/documents/pdf/reports/wcdbv2.pfd>
5. Delaware Preventing Child Deaths in the First State. Child Death, Near Death and Stillbirth Commission Annual Report from 2000 to 2009. <http://courts.delaware.gov/childdeath/reports.htm>
6. <http://www.cdc.gov/SIDS/index.htm>

7. Shapiro-Mendoza, C. Infant Death Investigation Foundations Skills. Sudden, Unexplained Infant Death Investigation Training Text. Centers for Disease Control and Prevention. Atlanta, GA. [http://www.cdc.gov/sids/Training Material.htm](http://www.cdc.gov/sids/Training%20Material.htm)
8. Shapiro-Mendoza, C.K., Kimball, M., Tomashek, K.M., Anderson, R.N., and Blanding, S. 2009. US Infant Mortality Trends Attributable to Accidental Suffocation and Strangulation in Bed From 1984 Through 2004: Are Rates Increasing? *Pediatrics* Vol. 123 No.2 pp. 533-539.
9. Colson, E.R., Rybin, D., Smith, L.A., Colton, T., Lister, G., and Corwin, M.J. 2009. Trends and Factors Associated With Infant Sleeping Position. *Archives of Pediatrics & Adolescent Medicine*. Vol. 163 No.12, pp. 1122-1128.
10. Found at <http://www.ama-assn.org/---/i-09-complete-handbook-addendum.pdf>
11. American Academy of Pediatrics, Task Force on Infant Sleep Position and Sudden Infant Death Syndrome. The Changing Concept of Sudden Infant Death Syndrome: Diagnostic Coding Shifts, Controversies Regarding the Sleeping Environment, and New Variables to Consider in Reducing Risk. *Pediatrics*. 2005; 116; pp.1245-1255.
12. Scheers, N.J., Rutherford, G.W., & Kemp, J.S. 2003 Where Should Infants Sleep? A Comparison of Risk for Suffocation of Infants Sleeping in Cribs, Adult Beds, and Other Sleeping Locations. *Pediatrics* 112, pp.883-889.
13. Child Death, Near Death & Stillbirth Commission & Child Protection Accountability Commission. 2<sup>nd</sup> Annual Joint Meeting May 2006.
14. Aris, C., Stevens, T., Lemura, C., Lipke, B., McMullen, S., Cote-Arsenault, D., & Consesstein, L. 2006. NICU Nurses' Knowledge and Discharge Teaching Related to Infant Sleep Position and Risk of SIDS. *Advances in Neonatal Care* 6 (5): pp.281-294.

# Appendix

<u>ASPHYXIA, SIDS, SUID &amp; UNDETERMINED 1996-2003 (Calendar Year)<sup>1</sup></u>
ASPHYXIA – 9
SIDS – 58
SUID – 28
<u>UNDETERMINED – 20</u>
<b>TOTAL - 115</b>

## Manner and Cause of Death by Age Group Review Year Range: 2003 to 2010 Delaware Child Deaths Reviewed

Manner	Age Group					Total
	<1	1-4	5-9	10-1	15-1	
Natural	377	40	28	20	16	481
Undetermined	40	4	1	0	1	46
Unknown	3	0	0	2	0	5

Manner	Cause	Age Group			Total
		<1	1-4	5-9	
Natural	SIDS	23	2	0	25
Undetermined	medical cause	0	0	0	0
Unknown		0	0	1	1

<sup>1</sup> These numbers were gathered before CDNDSC had dedicated staff and the National CDR datatool website was not utilized.



Age Group	Manner	Cause	<1	1-4	5-9	10-14	15-17	Total
	<b>Accident</b>							
	Asphyxia		9	1	4	1	0	15
	Undetermined Injury		0	0	0	0	0	0
	Unknown		0	1	0	0	0	1
	Asphyxia		0	0	0	0	2	2
	Undetermined Injury		0	0	0	0	0	0
	Unknown		0	0	0	0	0	0

Age Group	Manner	Cause	<1	Total
	<b>Undetermined</b>			
		Asphyxia	6	6
		Other Injury	0	0
		Undetermined Injury	2	2
		Unknown	1	1

## Suffocation/Asphyxia Death Demographics Review Year Range: 2003 to 2010

Action Causing Suffocation/Asphyxia

Sleep-related

Age Group	Total
<1 Year	17
1-4 Years	1
5-9 Years	2
<b>Total</b>	<b>20</b>

Sex

Male	7
Female	14
<b>Total</b>	<b>21</b>

**Action Causing Suffocation/Asphyxia**

**Sleep-related**

<b>Ethnicity</b>	
Hispanic (any race)	1
<b>Race</b>	
White	7
Black, African American	14
<b>Total</b>	<b>21</b>

<b>Sleep-related</b>	<b>Swaddled in tight blanket</b>	<b>Total</b>
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**Manner of Death**

Natural	1	0	<b>1</b>
Accident (Unintentional)	12	0	<b>12</b>
Homicide	0	1	<b>1</b>
Undetermined	7	0	<b>7</b>
<b>Total</b>	<b>20</b>	<b>1</b>	<b>21</b>
Supervisor impaired by alcohol/drugs	4	0	<b>4</b>

# Sleep-Related Death Demographics

## Review Year Range: 2003 to 2010

### Delaware Child Deaths Reviewed

Age Group

Sex

	Male	Female	Total
Hispanic /Latino (any)	0	1	1
Race	0	1	1
0-1 Months	1	0	1
4-5 Months	0	1	1
6-7 Months	0	1	1
8-11 Months	1	0	1
5 Years and Up	1	0	1
Sub Total	2	3	5
Age Group			

Sex

	Male	Female	Total
White	9	3	12
0-1 Months	5	7	12
2-3 Months	2	0	2
4-5 Months	1	0	1
8-11 Months	0	1	1
1-4 Years	1	1	2
5 Years and Up	1	1	2
Sub Total	18	12	30
Black, African American	9	8	17
0-1 Months	7	10	17
2-3 Months	2	4	6
4-5 Months	3	2	5
6-7 Months	1	1	2
8-11 Months	1	2	3
1-4 Years	1	0	1
5 Years and Up	1	0	1
Sub Total	24	27	51

	Male 4-5 Months	Female	Total
Asian	1	1	1
Unknown Race (may have Been mixed)			
0-1 Months	0	1	1
4-5 Months	0	1	1
8-11 Months	0	1	1
Sub Total	0	3	3
	Male	Female	Total
All Races			
0-1 Months	18	12	30
2-3 Months	12	17	29
4-5 Months	5	5	10
6-7 Months	3	2	5
8-11 Months	2	2	4
1-4 Years	1	3	4
5 Years and Up	2	1	3
Sub Total	43	42	85

### Sleep-Related Deaths by Cause Review Year Range: 2003 to 2010 DelawareChild Deaths Reviewed Cause of Death

	SIDS	Asphyxia	Medical Condition	Undeter.	All Other Causes	Total
0-1 Months	22	3	3	1	1	30
2-3 Months	22	6	1	0	0	29
4-5 Months	8	2	0	0	0	10
6-7 Months	0	4	0	1	0	5
8-11 Months	2	1	1	0	0	4
1-4 Years	2	1	1	0	0	4
5 Years and Up	0	2	1	0	0	3
<b>Total</b>	<b>56</b>	<b>19</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>85</b>
						20

# Circumstances Involved in Sleep-Related Deaths Review Year Range: 2003 to 2010 Delaware Child Deaths Reviewed

Age Group

	0-1 Mos	2-3 Mos	4-5 Mos	6-7 Mos	8-11 Mos	1-4 Yrs	5 Yrs Up	Unknown	Total
Unobstructed by person or object	1	2	2	0	1	1	0	0	7
On top of person	0	0	1	0	0	0	0	0	1
On top of object	0	4	1	0	0	0	0	0	5
Under person	3	3	0	3	0	2	0	0	11
Under object	0	1	0	0	0	1	0	0	2
Between Person	0	1	0	0	0	0	0	0	1
Between object	0	0	0	0	1	0	0	0	1
Wedged	0	1	1	1	0	0	2	0	5
Pressed	1	3	2	0	0	0	0	0	6
Fell or Rolled onto object	2	1	0	0	0	0	0	0	3
Other	2	0	0	0	0	0	1	0	3
Unknown	21	13	3	1	2	0	0	0	40
<b>Total</b>	<b>30</b>	<b>29</b>	<b>10</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>85</b>

Footnote: Under and between objects include animals.

# Factors Involved in Sleep-Related Deaths Review Year Range: 2003 to 2010 Delaware Child Deaths Reviewed

Age Group	0-1 Mos	2-3 Mos	4-5 Mos	6-7 Mos	8-11 Mos	1-4 Yrs	5 Yrs Up	Total
Deaths Reviewed	30	29	10	5	4	4	3	85
Not in a crib or bassinet	19	23	8	5	3	3	3	64
Not sleeping on back	11	14	6	1	1	2	2	37
Unsafe bedding or toys	10	7	4	1	0	0	0	22
Sleeping with other People	19	16	6	4	3	3	0	51
Obese adult sleeping with child	5	3	1	2	0	1	0	12
Adult was alcohol impaired	2	0	0	1	0	0	0	3
Adult was drug impaired	1	2	0	1	0	0	0	4
Caregiver/Supervisor fell asleep while bottle feeding	1	0	0	0	0	0	0	1
Caregiver/Supervisor fell asleep while breast feeding	1	1	0	0	0	0	0	2

**Sleep-Related Deaths by Acts that Caused or Contributed to Death  
Review Year Range: 2003 to 2010  
Delaware Child Deaths Reviewed**

Cause of Death

	SIDS	Asphyxia	Medical Condition	Undeter.	All Other Causes	Total
Deaths Reviewed	56	19	7	2	1	85
Poor/absent supervision	0	2	0	0	0	2
Child neglect	0	1	0	0	0	1
Other negligence	8	4	1	0	0	13
Unknown	97	27	12	2	1	139