Safe Sleep for Infants

A Workshop for Home Visitors Developed by:
The Arkansas Home Visiting Network Training Institute

Prepared by the Injury Prevention Center at Arkansas Children’s Hospital and the University of Arkansas for Medical Sciences
Introduction

This ready to use training module was designed by the Arkansas Home Visiting Network Training Institute. It is intended to be a blueprint of how to deliver training on this particular topic. It is our hope that you will make adjustments as needed and add your own creativity to the presentation. It is not intended that you deliver this training reading the script verbatim with no modifications, but rather as a trainer you should adjust the presentation and activities to reflect the needs of your audience.

A final disclaimer: The information provided does not contain everything you need to know about providing training on this topic, so please take some time to read up on the subject beforehand so your participants can truly learn from you. Suggested readings are listed for you in the resource section.
Training Overview:
The purpose of this training is to provide current recommendations for positioning and environment for infants. Many mothers and other care givers continue to place children on the stomachs during sleep. Additionally, many infants sleep in environments that have hazards for suffocation, choking, entrapment, and falls as well as tobacco exposure.

Instructions are provided to guide the presentation and discussions with participants. Text that is marked by ☑️ indicates a script that can be used by the trainer to relate content factually.

Training Objectives for Participants:
Upon completion of this training, the home visitor will be able to:

1. Discuss safe sleep recommendations by the American Academy of Pediatrics
2. Describe risk factors for sleep-related deaths in infants
3. Advise families on changes in sleep practices

Materials Needed:
1. PowerPoint presentation

Handouts:
• Handouts of slides are included in the Appendix. They are ready to copy and distribute.

References/Resources:
1. The Injury Prevention Center at Arkansas Children’s Hospital has fact sheets on sleep related safety and other leading injury mechanisms that can be distributed to the general public. http://www.archildrens.org/IPC.
3. The Consumer Product Safety Commission has information on purchasing cribs as well as recalls on infant products that have been found to be unsafe. http://www.cpsc.gov.
4. The American Academy of Pediatrics has best practice recommendations for the general public and health care providers and information that can be distributed to the general public. http://www.aap.org
5. First Candle is a non-profit organization dedicated to increasing the number of infants who survive their first year of life or have their first birthday. http://www.firstcandle.org
Training Outline/Suggested Agenda:

1. Introductions and Objectives (slides 1 and 2) 5 minutes
2. Scope of the Problem of Infant Mortality (slides 3 – 6) 10 minutes
3. SIDS Definition and Risk Factors (slides 7 – 8) 10 minutes
4. AAP 2011 Recommendations (slide 9) 5 minutes
5. Pre-delivery precautions (slides 10 and 11) 5 minutes
6. Room Sharing Instead of Co-Sleeping (slide 12) 5 minutes
7. Sleep Surface (slides 13 – 16) 10 minutes
8. Back to Sleep (slides 17 and 18) 10 minutes
9. Overheating (slide 19) 5 minutes
10. Identification of Risks (slides 20 – 26) 10 minutes
11. Conclusions (slide 27) 5 minutes
12. Resources (slide 28) 5 minutes
Training Directions

Slide 1:

Welcome participants and thank them for attending the session.

Conduct a brief introduction of the trainer, then participants.

✓ Some of us probably put our babies to sleep on their tummies. Some of us also probably shared a bed with our infants. Others of us may have decorated a nursery with fluffy blankets, bumper pads, and stuff animals in the crib. Research in recent years has found that these things are all contributing factors to the risk that an infant will die before their first birthday.

Move to next slide
Go over objectives briefly.

✓ The training today is about safe sleep for infants. The objectives for the training are for you as a home visitor are to be able to:

1. Discuss safe sleep recommendations by the American Academy of Pediatrics
2. Describe risk factors for sleep-related deaths in infants
3. Advise families on changes in sleep practices.

✓ We will go into further detail on each of the topics during the presentation. Please feel free to ask questions as we proceed through the slides.
Slide 3:

The purpose of this slide is to illustrate how many more infants die in the US than most other countries.

The rate is per 1,000 live births. When explaining rates, live births can be rounded up or down as appropriate, using a qualifier such as “nearly” or “approximately” (i.e. nearly 7 children out of every 1,000 born in the US will not live until their first birthday).

- Infant mortality is defined as the death of an infant during the first 12 months of life.

- The US was ranked 30th in 2005 for infant mortality, a rate that is one of the highest in the world for developed countries. Fewer children die before their first birthday in other countries than in the United States, even in countries such as Cuba that do not have the resources we have in the US.

Move to next slide.
Slide 4:

The purpose of this slide is to illustrate how many more infants die in Arkansas than the US.

- On the previous slide, we say how the infant mortality rate is greater in the US than in other countries. Let's look now at how Arkansas compares to the nation.

- The yellow line represents infant mortality rates in the US since 1990; the red line is Arkansas. You can see that in 1990, infants in Arkansas died before their first birthday at the same rate as infants in the US. While the national rate has trended downward, the Arkansas rate peaked in 1992 and has remained higher than the national rate. When it appears our state rate is trending downward, something happens in subsequent years where infant deaths increase.

Move to next slide.
Slide 5:

This slide is a good snapshot of counties where infants are at higher risk of dying before their first birthday.

- The Arkansas Department of Health provides county-level data on infant mortality. Because of the analysis and reporting processes data has to go through, our best data is generally two to three years behind. The darker the "red", the higher the infant mortality rate per 1,000 live births. As an example, 16 infants died for every 1,000 live births in Crittenden County from 2003-2007.

- Take a moment to find your home county. What do you think are some of the contributing factors to infant deaths? Examples: lack of adequate prenatal care and health care after birth; low use of car seats or car seats installed incorrectly, shaken baby syndrome, SIDS, drowning.

Move to next slide
Slide 6:

This slide expands on the different types of infant death.

- When we look at the reasons for infant mortality, or infant death, we can see that a large number of early deaths are due to birth defects and short gestation (or prematurity). These deaths often occur during the infant’s first month of life.

- Once an infant reaches one month of age, the most common causes of death have to do with sleep safety, specifically, Sudden Infant Death Syndrome (or SIDS).

- You see “accidents/unintentional injuries” listed here, and in that category, suffocation is the most common cause of death for infants, and is most likely to happen during sleep.

Move to next slide
Slide 7:

SUID or “Sudden Unexpected Infant Deaths” are defined as deaths in infants less than 1 year of age that occur suddenly and unexpectedly, and whose cause of death are not immediately obvious prior to investigation. The spokes in the diagram above identify some of the causes of SUID that may go undetected without proper investigation.

Half of SUID deaths are SIDS. Note the criteria for using “SIDS” as a cause of death, in the blue box. If things go as they should, the only way to accurately identify about SIDS as the cause of death is to: 1) complete a thorough investigation of the death scene, 2) complete an autopsy, and 3) review the clinical history of the infant and both parents.

It has not always been standard practice to complete all of these steps to use the SIDS diagnosis. Many states, including Arkansas, have established “infant death review teams” to standardize the way we investigate and classify infant deaths.

It is also important to note that not all sleep-related deaths are SIDS. Suffocation is directly related to an infant’s sleep position and sleep environment and is preventable in many cases. We must continue to educate the families we serve, to help them view infant sleep-related death as preventable, instead of a mysterious phenomenon outside their control.
Because unsafe sleep practices can be a risk factor for SIDS, let’s talk a bit more about what puts an infant at risk for SIDS and what is shown to be helpful in preventing it. There is not one definitive cause for SIDS. It is believed that there are several factors that increase an infant’s risk of dying from SIDS. This is called the Triple-risk Model shown on the slide:

1. Vulnerable infant means that there is an underlying defect or brain abnormality makes the baby vulnerable. Certain factors, such as defects in the parts of the brain that control respiration or heart rate, or genetic mutations, increase vulnerability.

Half of SUID deaths are SIDS. Note the criteria for using “SIDS” as a cause of death in the blue box. If things go as they should, the only way to accurately identify about SIDS as the cause of death is to:

   A) complete a thorough investigation of death scene

   B) perform autopsy

   C) review the clinical history of the infant and both parents.

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2. Critical developmental period refers to the infant's first six months of life. During this period, there are rapid growth phases and changes in homeostatic controls occur. These changes may be evident (e.g., sleeping and waking patterns), or they may be subtle (e.g., variations in breathing, heart rate, blood pressure, and body temperature). Some of these changes may temporarily or periodically destabilize the infant's internal systems.

3. External challenges are things in the baby's environment that most babies encounter and can survive, such as second-hand tobacco smoke. Infants exposed to secondhand smoke are more likely to die from SIDS than infants who are not exposed. These are also things that may change a baby's body functions, such as overheating, a stomach sleep position, or an upper-respiratory infection. Although these stressors are not believed to single-handedly cause infant death, they may tip the balance against a vulnerable infant's chances of survival.

We do not always know about conditions that result in a vulnerable infant. We can assume all infants go through one or more periods of critical development. This area of external challenges is the one area we can modify routinely. External challenges are generally things that a parent can change or reduce the risk. Avoid commercial devices marketed to reduce the risk of SIDS, such as cardiorespiratory monitors.

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Slide 9:

The sleep environment for an infant is one of the external challenges discussed on the previous slide that can be modified or changed to reduce the risk of SIDS. The American Academy of Pediatrics (AAP), the professional association of pediatricians, is committed to the optimal physical, mental, and social health and well-being for all infants and children. The AAP has a Task Force devoted to studying this issue on an ongoing basis, and as indicated by research, updating policy statements from time to time. The Task Force updated its policy statement on infant sleep safety most recently in October of 2011. Many of the recommendations remain the same as in previous statements (e.g. placing infants to sleep on their backs), and a few new recommendations were added. One thread seen throughout the document is a need to focus on “safe sleep,” and not just “back to sleep.” Specifically, there is a need to educate more people about the importance of the infant’s sleep environment and other factors that can contribute to infant safety during sleep. We will look at each recommendation individually.

As we look at each recommendation, think about the families you will be working with. Think about how you might educate families about these issues, and provide information about community resources that might help families implement these safety practices.

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During Pregnancy

The following behaviors can reduce the risk of a vulnerable infant:

• Get regular prenatal care
• Avoid tobacco use or smoke exposure during pregnancy
• Avoid alcohol and illicit drug use during pregnancy

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Families receive many mixed messages through media and product manufacturers. The AAP is calling on those groups to follow the safe sleep guidelines in their messaging.

As educators, we must keep in mind that families are seeing and hearing information that may contradict what we are advising them to do. For this reason, it is important to have ongoing discussions with families about their plans for infant safety, and to be prepared to speak to the safety of various products, or to refer families to someone who can.
The AAP advises parents to share a ROOM, not a bed, with their infants for at least the first 6 months.

A reason frequently expressed for bed sharing is because the mother is breastfeeding and bed sharing is more convenient than having the infant in another room. Breastfeeding is a great thing to do for infants and is recommended by the AAP. There are many health benefits for both the mother and the infant. You can encourage mothers to breastfeed safely. The AAP recommends keeping the infant in the mother’s bedroom but in their own sleeping space, such as a crib, cradle or bassinette.

Another reason parent’s may say they bed share with their infant is to increase bonding. Bonding is important, but it does NOT happen when both parent and baby are sleeping. Encourage parents to bond safely while the parent is awake.

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Infants need their own separate sleeping space. They should not sleep in a bed with other children, pets, or adults. There is no safe way to share a bed with an infant. It is important to share all of these risks of bed sharing with families.

1. **Suffocation** happens when something is covering the infant’s face and he or she isn’t getting oxygen. Someone sleeping with a baby could roll onto the baby and cause suffocation. The baby could roll into the other person. The use of pillows, overstuffed blankets, bumper pads, and large stuffed animals can also result in suffocation.

2. **Strangulation** is something external cuts off oxygen and blood flow to the brain. A baby who is bed sharing with an adult could roll between the mattress, into the space between mattress and headboard, or between mattress and footboard. The baby could get trapped there (*entrapment*) and have their airway cut off (*strangulation*). Strangulation can result in death or permanent disability.

3. Because a bed does not have gates surrounding the surface, the baby could fall from the bed. They could break bones or have a serious head injury as a result of a fall. Some parents may use pillows to keep the baby from rolling off the bed. In doing so, they may prevent a fall from the bed, but unknowingly create a suffocation risk.

Adults that smoke, overweight adults, those using alcohol and other drugs, and those who are overly tired, present even higher risk to their infants for these types of injuries when they bed share with an infant.
Slide 13:

New cribs sold at retail stores meet current safety recommendations. If problems are found with cribs later, after they are sold, the manufacturer may issue a “recall” with instructions for repair or replacement. The Sisters United volunteer can encourage parents to return the registration card that comes with new cribs so they will be notified directly of recalls.
Many parents will purchase used cribs or have used cribs given to them by friends and family. If a baby will be sleeping in a used crib, advise parents to do the following safety precautions:

- Check to be sure the crib has not been recalled. *(Direct participants to CPSC web site)*
- Use as an example: A recent recall was issued on all drop-side cribs. Cribs that are more than 10 years old, with sides that “drop,” are not safe.

Call the manufacturer to find out if there are replacement parts available.

- Make sure the rails aren’t too far apart. Use a soda can – if it fits through the rails, they’re too far apart.
- Make sure all of the parts are there and that they work.
- Use as an example: Cribs with one side that drops down should be examined carefully. Be sure the moving side stays up when in the “up” position. Be sure the moving side is straight up and down, not falling outward forming a V. Do not use a crib if someone has used something not intended for the crib to keep the side in the up position, such as duct tape.
- The crib needs a firm mattress that takes up the entire space of the crib. There should not be a space between the crib and the rails.
Slide 14:

This slide shows features recommended in recent years by the CPSC that may not be found in older cribs.
Some parents may find it difficult to purchase a crib – they can be expensive! Consider a "pack and play" type crib – also called a travel yard or play yard. Most of these are safe for infants to sleep in. Look for the certification label from the Juvenile Products Manufacturers’ Association, or JPMA (pictured on slide).

Other options are cradles and bassinettes.

Move to next slide
The crib should be boring but safe! The only things needed in the crib are: crib, mattress, fitted sheet (the kind with elastic), and the baby!

Do not put anything soft in the crib. It can be a suffocation hazard. This includes pillows, heavy blankets, stuffed animals, and bumper pads.

Sleep positioners and wedges are also dangerous and should not be used.

Mobiles should be removed once baby can sit up. There is no way to know when the baby will stand up. Once they can stand, they could pull the mobile down and the string could get tangled around the baby’s neck, resulting in strangulation.

Keep baby monitors out of the crib. The cords can also get wrapped around the baby’s neck and result in strangulation.
There have been changes in recent years in how we put babies down to sleep.

Long ago, we put babies on their bellies. We then found that babies on their bellies were at higher risk of suffocation. Next, we put them on their sides, but found that they didn’t stay on their sides, but that they rolled one way or the other – onto their backs or onto their bellies. AAP does NOT recommend the use of sleep positioners. The back is the safest way for the baby to sleep.

A common myth is that babies will choke if they are on their backs and spit up. Babies are LESS likely to choke when they are on their backs. In the picture above (Use your finger to show these paths),

- Esophagus is food tube; trachea is air tube
- (Point to picture on left) If baby spits up, food travels from stomach to esophagus. Gravity will cause it to land at the opening to the trachea. This blocks the airway! Forceful vomit may come out the mouth, and since the baby’s mouth is downward, the baby may breathe in the vomit.
- In the second picture (Point to picture on right), the baby is on its back. If this baby spits up, food must travel up the esophagus, fighting gravity. It is not likely to come up and around into the trachea. Forceful vomit will come out of the mouth, and down the sides of the face.

This has been studied by doctors and researchers. The BACK is the safest way for the baby to sleep.

Move to next slide
Slide 18:

Some people feel that the baby is more comfortable on their bellies. Babies are not born with habits. They will learn to be comfortable however they are placed to sleep. Choose the safe way. Babies will have nights when they don’t sleep well. Look for other ways to soothe them. Do not change their position.

This has changed over the years. Educate everyone who will take care of baby – especially those who raised babies some time ago. Be sure to give specific instructions to those who will care for your baby.

Babies do need time on their tummies, but only when they are awake, and are supervised by an adult.

It is important that they sleep on their backs every time they sleep whether at night and during naps. It is especially dangerous to put a baby on their belly when they are not used to sleeping that way.

Move to next slide
Avoid Overheating

- Set the room temperature the same as you would for an adult
- Dress the baby in as little or as much clothing as you would wear to be comfortable
- Use the “feet to foot” method with blankets

Slide 19:

Don’t overheat the baby. Healthy babies do a good job regulating their body temperature. They don’t need to be bundled up.

Dress the baby in as much clothing as adults are comfortable in.

If you use a blanket, put the baby’s feet toward the foot of the crib. Tuck the blanket in, under the mattress, on 3 sides. Bring the blanket up no higher than the baby’s lower chest. This is called the “feet-to-foot” method. This helps hold the blanket in place so the blanket doesn’t end up on the baby’s face.

Move to next slide
Slide 20:

**Now let's see what you have learned.**

I am going to show you a couple of pictures. Tell me what safety risks you see and what you would recommend to the parents.
The crib has a thick bumper pad that could be a suffocation hazard. **Advise the parents to remove.**

A mobile is hanging above the child with stuffed figures. **Advise the parents that when the baby starts reaching and sitting up the mobile should be removed as it could be a choking hazard.**
Slide 22:

Slats that with enough space for a soda can to pass through could be an entrapment hazard that could ultimately lead to suffocation. It appears from the picture that the can is fitting through. **Advise the parents to not use the crib.**

Lower cost alternatives could be a play yard or bassinet.

Move to next slide
The baby is sleeping on his stomach. The current recommendation by the AAP is to place the baby on his back for sleeping. Also, the blanket appears lose and could be a suffocation hazard. **Advise the parents to place the baby on his back and use either a single blanket that extends only chest high and securely tuck in on three sides. The parents could also dress the baby in a sleep sack.**
Slide 24:

This crib contains a loose fitting blanket and sheet and a stuffed toy. The bedding could be a suffocation hazard and the toy could be a choking hazard if parts broke loose. Advise parents to remove all items.
Co-sleeping with a baby is never advised.

In this situation, the child could roll off onto the floor or suffocate under the weight of the adult. Advise the parents to place a child in the appropriate sleep environment.

The infant is also sleeping on its stomach. Advise the parents to always place the baby on its back for sleep, whether for a nap or the night.
The baby is on its side. **Advise parents to place the baby on its back.** If the baby’s development is such that he rolls on the side on his own during sleep, he can be left in that position.

The stuffed toy could be choking hazard. It appears that the ears are small and could become lodged in the baby’s throat if they tear apart from the toy. **Advise the parents to remove the toy.**
I would like to conclude by saying: Some babies are more vulnerable than others for SIDS.

Recommendations for safe sleep changed in 2011 to include position and environment. Other causes of sleep-related deaths in infants are:

- Suffocation
- Strangulation
- Entrapment
- Falls

Move to next slide
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