

# Infant Sleep Safety

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# SUID (Sudden Unexplained Infant Death)

## **Sudden Infant Death Syndrome (SIDS)**

- Unknown cause, however there are known risk factors
- Not “preventable”, but risks could have been reduced
- Coded as “natural” cause of death

## **Accidental Suffocation and Strangulation in Bed (ASSB)**

- Caused by an unsafe sleep environment
- Preventable
- Coded as “accidental” cause of death

## **Undetermined**

- Unknown cause
- Cases often have evidence of unsafe sleep environment
- Often (but not always) preventable
- Coded as “unknown” cause of death

Common SIDS and SUID Terms and Definitions. (2017, August 11). Retrieved from

<https://www1.nichd.nih.gov/sts/about/SIDS/Pages/common.aspx>



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# AAP safe sleep recommendations

- OSDH promotes the American Academy of Pediatrics safe sleep guidelines:

<http://pediatrics.aappublications.org/content/138/5/e20162938>

- AAP makes A, B, and C level recommendations (levels indicate level of rigor:
  - A= high quality consistent scientific evidence
  - B= limited but emerging scientific evidence
  - C= mostly expert opinion with few research studies conducted yet



# AAP safe sleep recommendations

## A level recommendations

- Babies are safest on their back
- Firm sleep surfaces protect against suffocation
- Breastfeeding (when possible) can reduce SIDS risk by 50% (Vennemann et al, 2009)
- Room-sharing with the infant on a separate sleep surface outside of the bed can allow parents to be more attentive to the child's needs while maintaining safe sleep habits



# AAP safe sleep recommendations

## A level recommendations

- Keeping the crib free of anything but the baby, pacifier, and a fitted sheet keeps their sleep environment safest
- Consider offering a pacifier at naptime and bedtime (after breastfeeding is established) to further reduce SIDS risk
- Set “smoke-free” rules around you and your baby before and after birth to keep tobacco smoke away from you and your baby’s environment to prevent risks of tobacco use
- Avoid alcohol and illicit drug use during pregnancy and after birth.



# AAP safe sleep recommendations

## B level recommendations

- AAP recommends to avoid the use of “smart” baby monitoring devices
  - This describes devices such as smart diaper clips, smart onesies, smart socks, and smart leg monitors
  - There are two concerns about these devices:
    - First: most aren’t evaluated for safety, accuracy, or efficacy by the FDA as other medical devices are. Consumer medical apps have a record of being dangerously inconsistent
    - Second: a faulty smart baby monitor could falsely reassure parents that an ailing baby is healthy, or alarm parents that a healthy baby is sick



Supervised, awake tummy time is recommended to facilitate development and to minimize development of positional



**BASE STATION**  
Notifies you if something's wrong



**OWLET APP**  
Shows you how baby's doing



**SMART SOCK**  
Tracks baby's heart rate and oxygen level



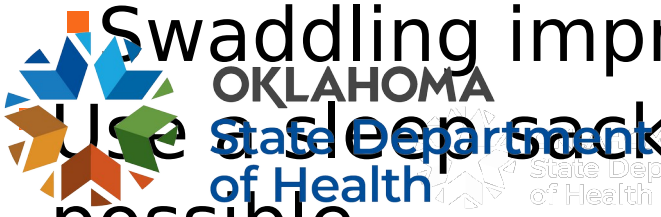
# AAP safe sleep recommendations

## C level recommendations

- Swaddling: while swaddling can be helpful with soothing and calming babies to sleep in the first few months, there is no evidence to recommend swaddling as a strategy to reduce the risk of SIDS.
  - AAP recommends swaddling stop by 2 months or before the baby intentionally starts to roll over due to risk of suffocation
  - Swaddling decreases arousal; this can be a problem in that decreased arousal is one of the main theories regarding why babies die of SIDS

■ Swaddling improperly can lead to hip dysplasia

Use a sleep sack in lieu of a swaddling blanket whenever possible

The logo for the Oklahoma State Department of Health is located in the bottom left corner. It features a stylized sunburst or starburst design composed of various colored triangles (blue, green, orange, red) in shades of blue, green, orange, and red. To the right of the graphic, the text "OKLAHOMA State Department of Health" is written in a sans-serif font, with "OKLAHOMA" in a larger, bold font above "State Department of Health".



# Protective factors

- Keeping the crib free of anything but the baby, pacifier, and a fitted sheet keeps their sleep environment safest
- Breastfeeding until 12 months when possible
- Regular tummy time when baby is awake
- Skin-to-skin contact for newborns
- Room sharing (not bed sharing)
- Utilizing a sleep sack for naps/bedtime
- Regular prenatal care during pregnancy
- Keeping up-to-date with immunizations
- Pacifier use after breastfeeding is established; without any strings or attachments due to choking or strangulation hazard



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# Safe Sleep Environment

## ■ **What is a firm sleep surface?**

- A firm mattress with a fitted sheet
- Crib, bassinet, portable crib (pack n' play)
- Use mattresses designed for that product; no gaps
- Has to meet CPSC (Consumer Product Safety Commission) safety standards
- Garage sale cribs/hand me down cribs are not recommended due to unknown age relative to recent safety standards
- Bedside sleepers and baby boxes are not recommended at this time due to lack of research showing effectiveness and lack of safety standards

# Overheating

- Overheating can lead to increased SIDS risk due to reduced arousal
- Soft surfaces lead to overheating
- Head covering can lead to overheating
- Be careful not to overcompensate for colder temperatures in the winter
- In general, if the temperature in the room is comfortable for an adult, it is appropriate for a baby



# Room sharing vs bed-sharing

- Room sharing is a protective factor that has been shown to decrease risk of SIDS by 50% (Leach, et al 1999)
- Infants should also not sleep with other babies, children, or pets
- Bed-sharing is not recommended due to enhanced risk factors such as:
  - Adult mattresses are often not a firm surface
  - Risk of overlaying/risk of gaps baby can roll into
  - Risk of entrapment against a pillow or in between bed and wall

## Other Unsafe sleeping environments

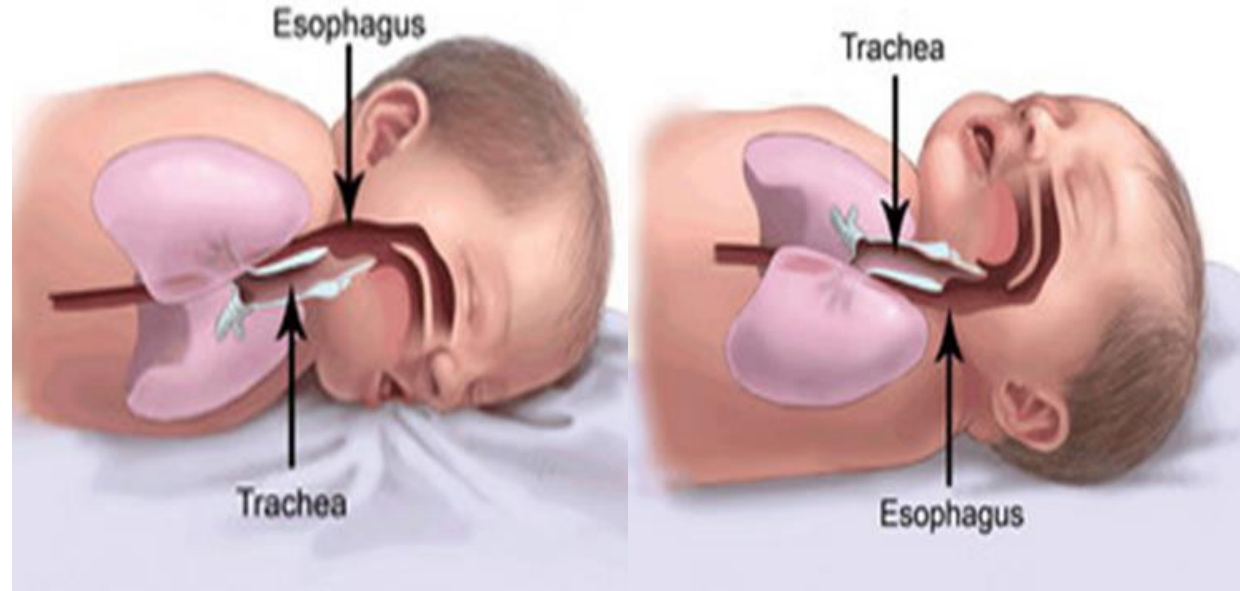
- SwaddleMe By Your Side Sleeper; which is made by SUMR Brands and has a flat mattress and low mesh sidewalls
- Baby Delight Snuggle Nest Infant Sleeper
- DockATot; which looks similar to a small raft; and has a soft side bumper



# Common reasons why parents do not put their baby on their back to sleep

- 1) Belief that baby could choke/aspirate
- 2) Belief that side sleeping is equally safe
- 3) Belief that baby does not sleep well in this position
- 4) Belief that a baby will get a flat head

# 1) What if my baby chokes while sleeping on his back?



The trachea is above the esophagus when baby is on their back

It would be difficult for vomit/spit-up to travel against gravity

There are folds that direct fluids back into the esophagus



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## 2) Belief that side sleeping is equally safe



- Side sleepers have a two-fold greater risk of SIDS
- AAP guidelines state that side sleeping is not as safe as back sleeping and is not advised
- The side is an unstable position in which an infant could easily roll onto their stomach





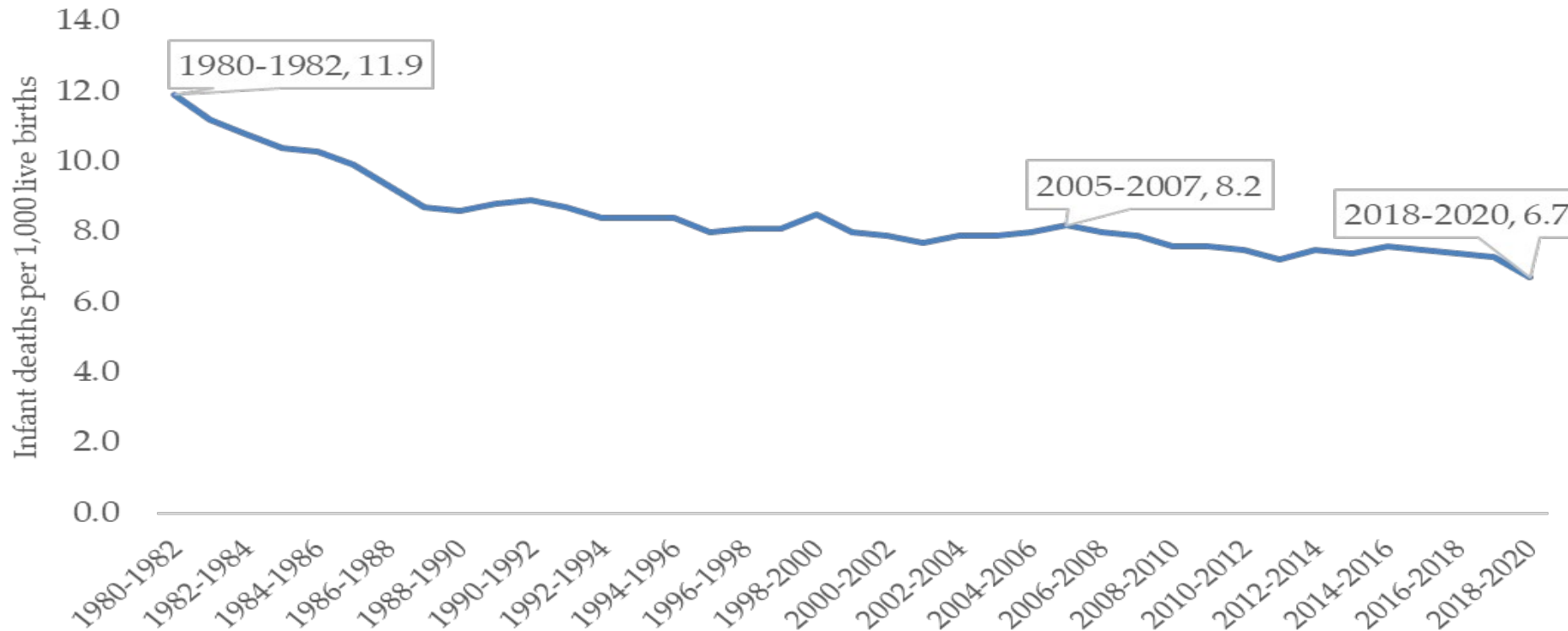
### 3) What if the baby won't sleep on her/his back?

- Work on learning the baby's cues to assess why they are fussy (hunger, dirty/wet diaper, teething, etc.)
- Place the crib/bassinet near your bed
- Utilize routine
- Keep stimulus low at night (minimal interaction and keep room dark)
- Use a white noise machine
- Remember that newborns and young infants sleep often, but irregularly

## 4) Belief that a baby will get a flat head

- Alternate the arm used to hold the baby
- Hold the baby upright when he or she is not sleeping (this is sometimes called “cuddle time”)
- Change the direction your baby lies in the crib from one week to the next (for example, have your baby’s feet point toward one end of the crib one week, and then have the feet point toward the other end of the crib the next week)
- Flat head (positional plagiocephaly) is temporary, cosmetic, and typically resolves on its own without any medical intervention

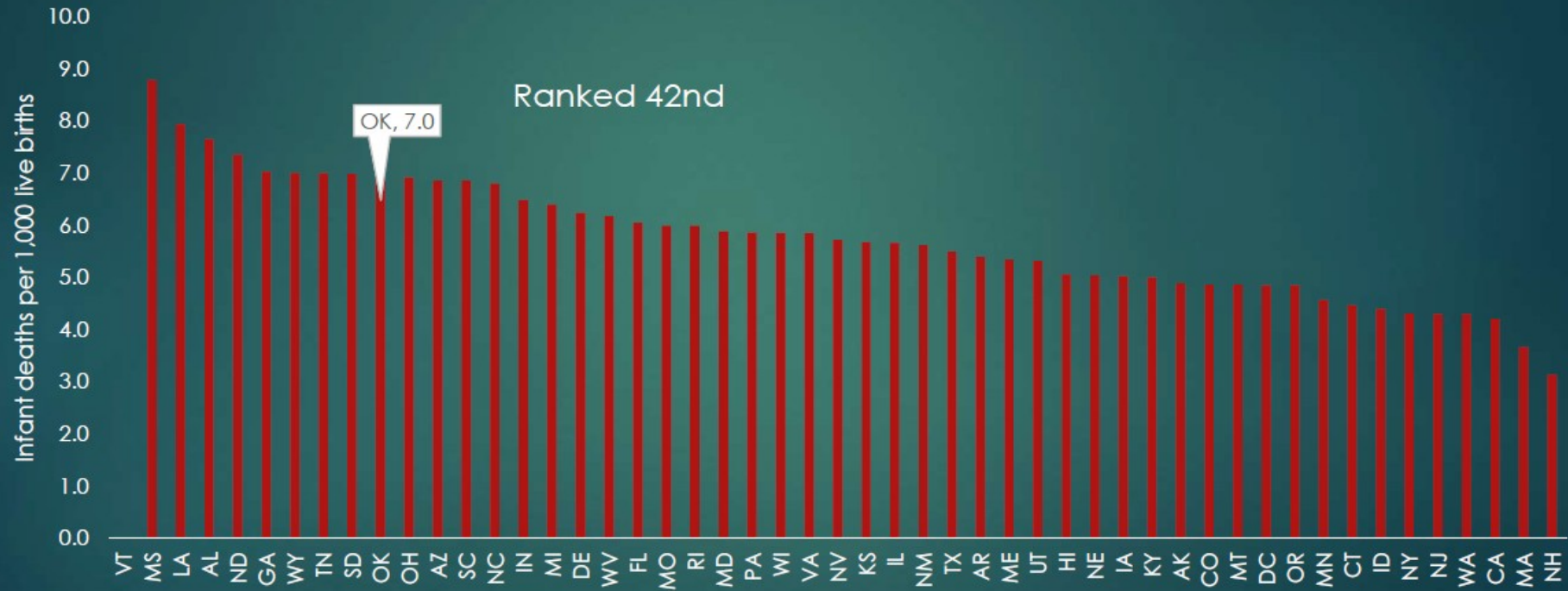
# Trend in infant mortality rate (multi-year rate)



Source: Oklahoma vital statistics, 1980-2020, 3-year rates

# Infant Mortality in Oklahoma

## Infant mortality rate by state



Source: CDC, NCHS, 2019

# Preparing for a Lifetime

- In 2009, the OSDH Maternal and Child Health Service launched “Preparing for a lifetime, it’s everyone’s responsibility” an initiative to impact infant mortality measures in Oklahoma
- The initiative is comprised of seven workgroups targeting infant mortality outcome measures
- These workgroups are led by OSDH program leads and internal as well as external partners
  - Maternal Mental Health
  - **Infant Safe Sleep**
  - Infant Injury Prevention
  - Preconception/Interconception
  - Tobacco
  - Prematurity
  - Breastfeeding



# Preparing for a Lifetime Measures

## Infant Safe Sleep specific measures:

Measure (source)	Most recent measure
Smoking during pregnancy (PRAMS)	11.6% (2016-2019)
Ever breastfed (PRAMS)	86.4% (2016-2019)
Back sleep position (PRAMS)	77.6% (2016-2019)
Infant bed-sharing (PRAMS)	30% (2016-2019)
Baby slept with a blanket (PRAMS)	52.8% (2016-2019)
Baby slept in a sleep sack/wearable blanket (PRAMS)	32% (2016-2019)

# Infant Safe Sleep Hospital Partnerships

- **Hospital sleep sack and safe sleep education partnership**
  - In 2013, the Oklahoma State Department of Health Maternal and Child Health Service began a program to distribute sleep sacks (also called wearable blankets) to 28 Oklahoma birthing hospitals that average more than 36,000 deliveries a year
  - These hospitals receive quarterly shipments of sleep sacks for each new birth in their hospitals and agree to engage in:
    - Implementing a safe sleep hospital policy following the AAP guidelines
    - Ensuring that all staff are trained in infant safe sleep practices and model these
    - Engaging families in education on the AAP safe sleep guidelines
    - Conducting audits of the hospital practices on safe sleep as well as their education efforts
  - Becoming certified through National organization “Cribs for Kids” as having met these criteria



# Infant Safe Sleep Hospital Partnerships

- **Oklahoma Health Care Authority-Oklahoma State Department of Health Crib Kit Partnership**
  - Project began in 2015 to mediate the lack of safe sleep spaces
  - Focus was placed toward the Native and African-American populations, who face disproportionately higher infant mortality rates
  - Currently distributing portable cribs (pack-n-plays) to families in need at OU Health Children's Hospital, Mercy Hospital in Ardmore, Hillcrest Medical Center in Tulsa, and Chickasaw Medical Center in Ada
  - The sites were trained and trained families on infant safe sleep practices
  - The educational materials as much as possible reflect the culture and background of the families served
  - Parents are surveyed on month following distribution regarding their infant sleep practices
- **441** portable cribs distributed through partner hospitals to-date



# Questions?

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**Preparing  
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It's Everyone's Responsibility

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