



Modeling Safe Sleep in the NICU

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Outline


- Definitions of SUID, SIDS, ASSB
- Data and Statistics
- AAP Task Force on SIDS – Updated 2016 recommendations
- Examples of Safe Sleep implementation in other NICUs
- Implementation of Safe Sleep in our NICU

Definitions

- **SUID** (Sudden unexpected infant death) – a sudden and unexpected death of an infant <1 year old with no immediate obvious cause
- Leading causes of **SUID**:
 - **SIDS** (Sudden infant death syndrome) - sudden death of an infant <1 year old that cannot be explained after a thorough case investigation, including scene investigation, autopsy, and review of the clinical history
 - **ASSB** (Accidental Suffocation and Strangulation in Bed) - infant deaths related to unsafe sleep practices from mechanisms such as soft bedding, overlay from another individual, or entrapment between objects
 - Unknown cause

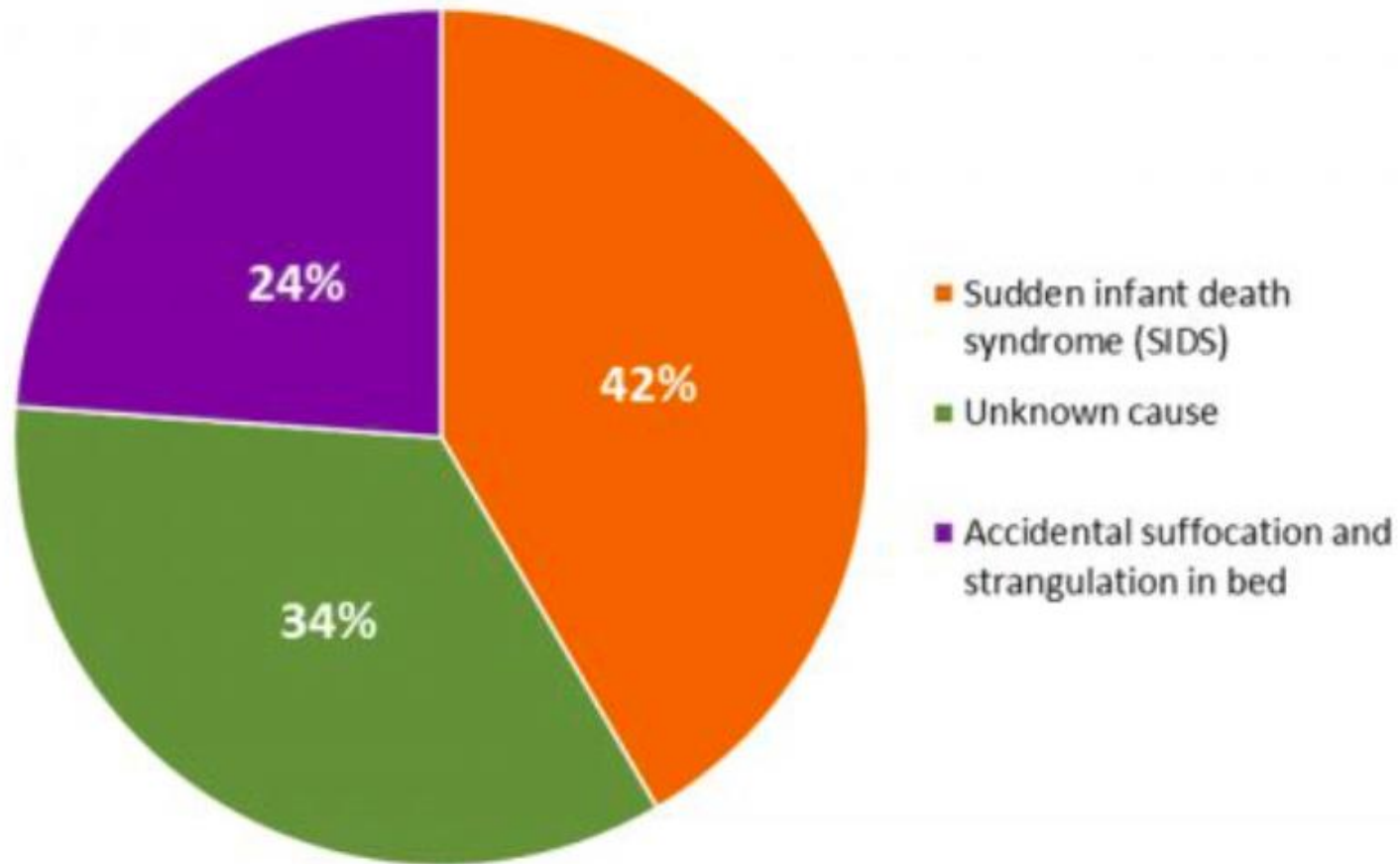


Data and Statistics

- ~4000 infants die each year in the US from SUID
 - 3rd leading cause of infant mortality
 - The leading cause of post-neonatal infant mortality
 - Preterm infants are at higher risk for SUID/SIDS with a possibly stronger association between prone sleep positioning and SIDS compared to term infants
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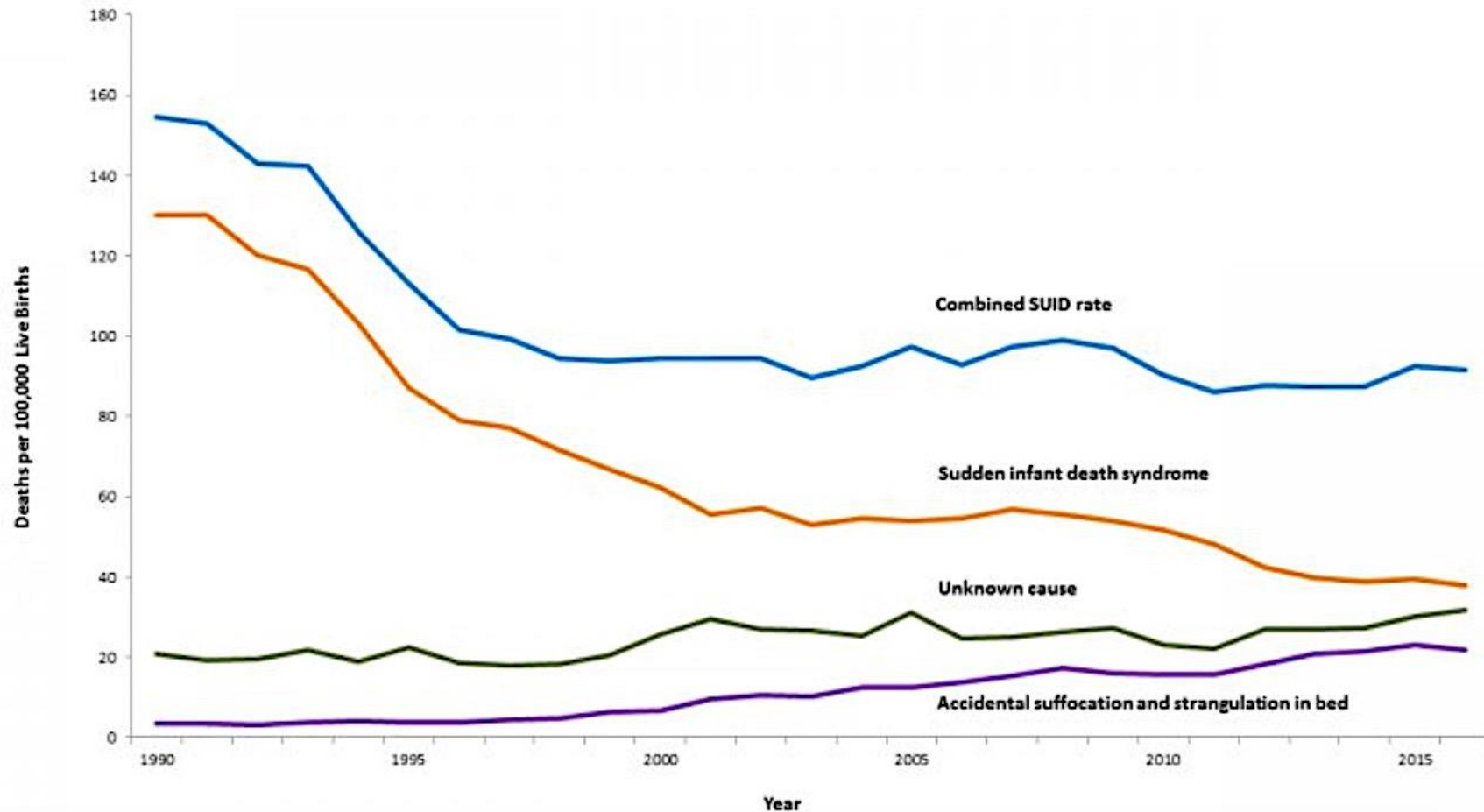
Data and Statistics

- Breakdown of Sudden Unexpected Infant Death by Cause, 2016



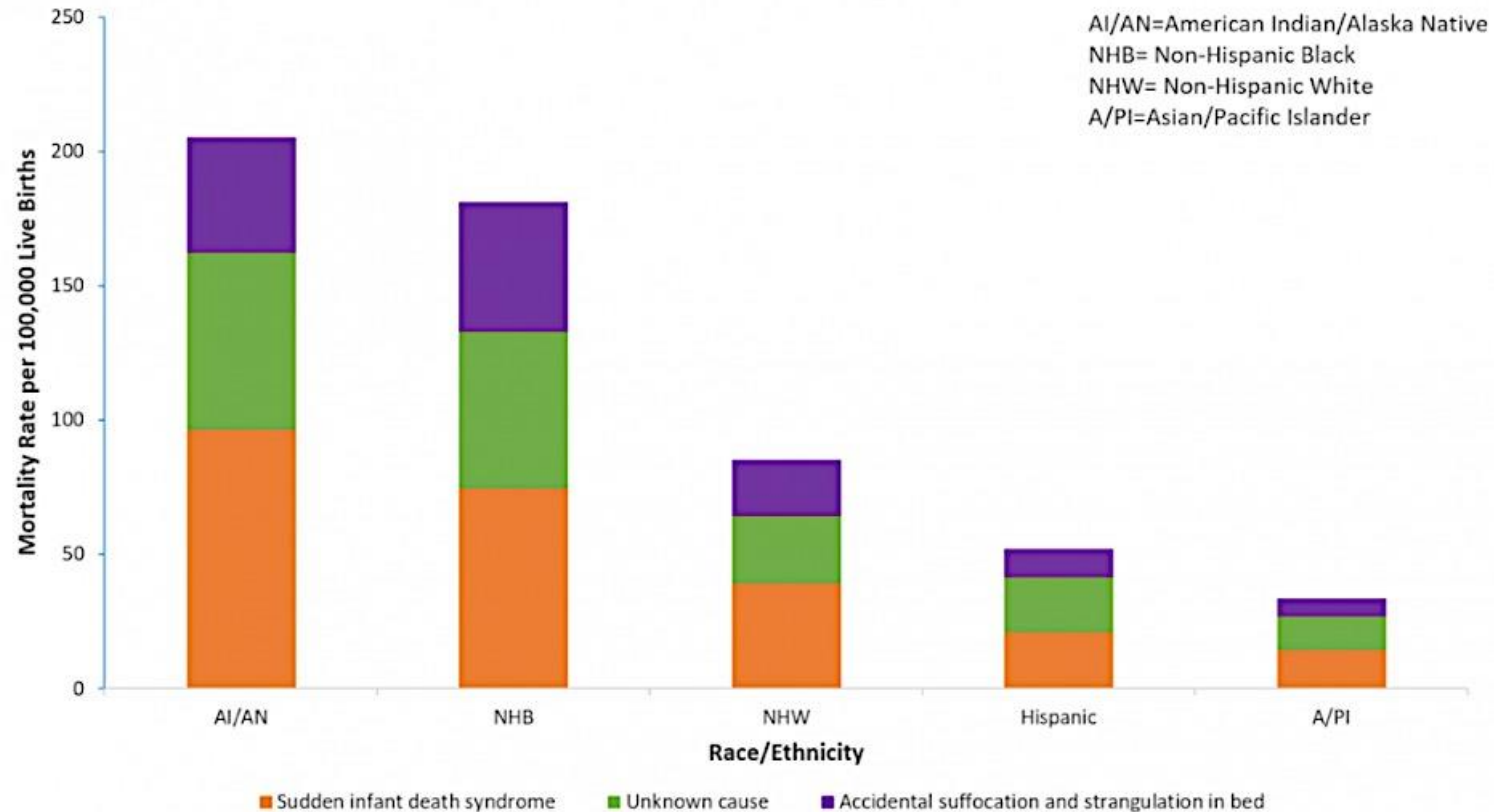
Data and Statistics

Trends in Sudden Unexpected Infant Death by Cause, 1990-2016



Data and Statistics

Sudden Unexpected Infant Death by Race/Ethnicity, 2013-2016





AAP Task Force on SIDS

Updated 2016 Recommendations for a Safe Infant Sleeping Environment



- Back to sleep
- Firm sleep surface
- Breastfeeding
- Room sharing but no bed sharing
- No soft objects or loose bedding
- Pacifier at naptime and bedtime
- Avoid smoking
- Avoid alcohol and illicit drugs
- Avoid overheating
- Regular prenatal care
- Vaccinate
- Do not use home monitors
- Supervised awake tummy time



AAP Task Force on SIDS

- Preterm infants should be placed in supine sleep position by 32 weeks PMA if they are clinically stable
- NICU personnel should endorse safe sleeping guidelines with parents of infants from the time of admission to the NICU
- Only 2/3 of all infants and less than ½ of black infants are placed in the supine position to sleep
- Preterm infants are less likely than term infants to be placed supine in the hospital as well as after discharge from the hospital
- SSP are rarely integrated into the routine clinical care of preterm infants

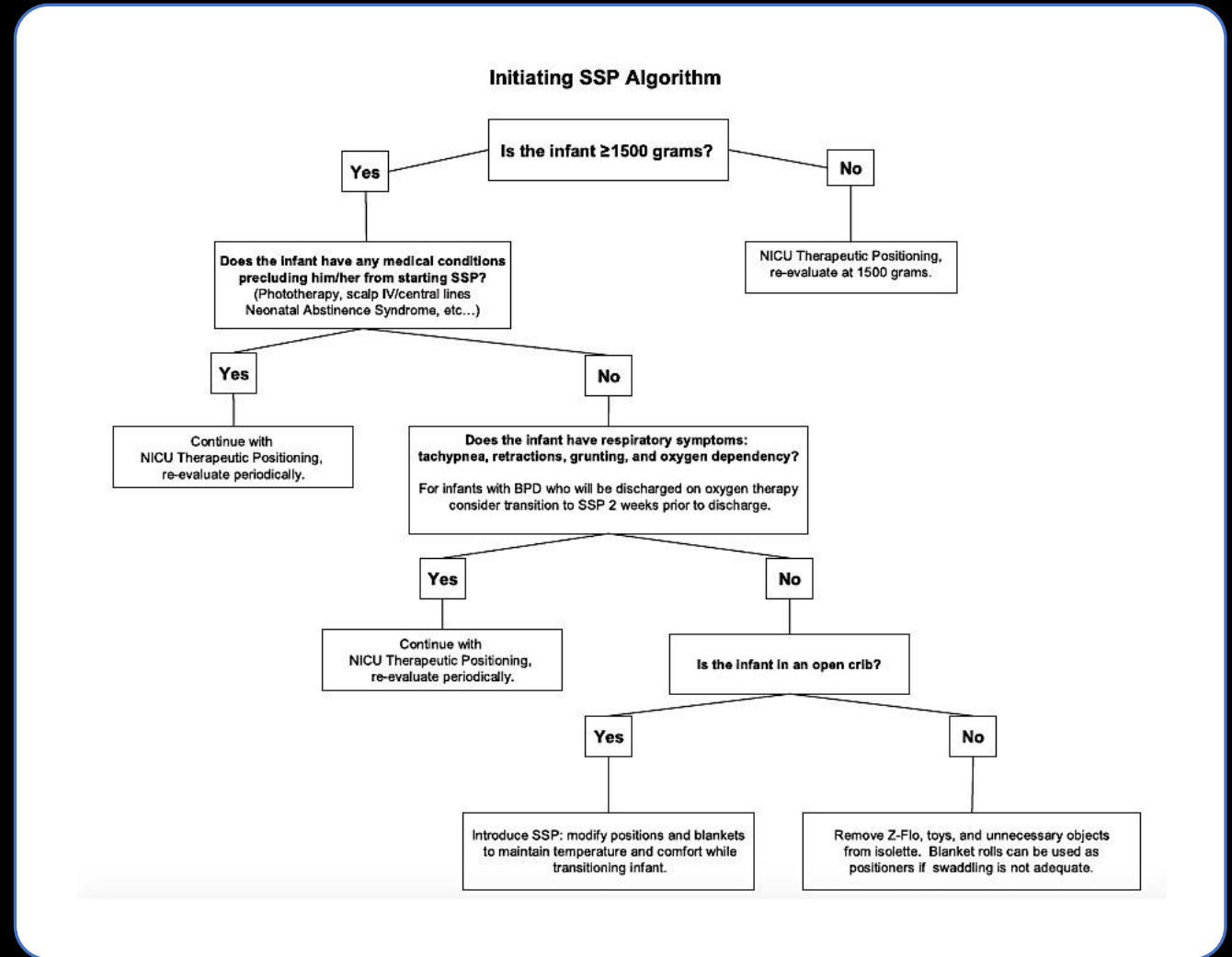
Examples of SSP implementation in the NICU

- Integrating “Back to sleep” into NICU Practice at UT Houston (Gelfer et al, Pediatrics 2013)
- State-wide QI collaborative in MA NICUs (Hwang et al, J Perinatol 2018)



Integrating “Back to sleep” into NICU Practice at UT Houston

- Gelfer et al, Pediatrics 2013



UT Houston-
Crib Card
recommending
either therapeutic
positioning or Back
to Sleep Practices
depending on the
readiness to begin
Safe Sleep

NICU Therapeutic Positioning

Examples of when NICU Therapeutic Positioning is appropriate:

- Respiratory symptoms such as tachypnea, retractions, grunting and oxygen dependency
- Nasal CPAP
- Nasal Cannula requirements other than home oxygen requirements
- Phototherapy
- Scalp IV or central lines
- Neonatal Abstinence Syndrome
- Lack of handling due to social reasons (please address with primary team)
- Any medical condition that requires prone or side lying positioning
- If tummy time cannot be implemented due to inability to be positioned prone (such as ostomy/surgical site)

Continue to evaluate infant for readiness to start Back to Sleep positioning

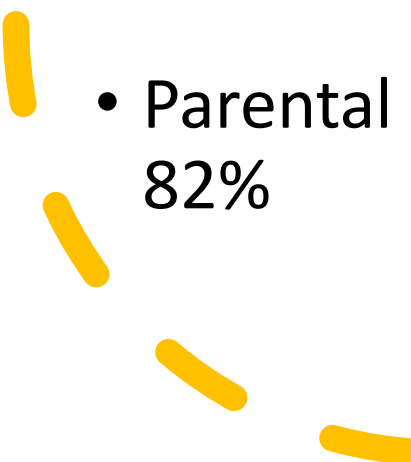
UT Houston –
Crib card
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Ready for Back to Sleep

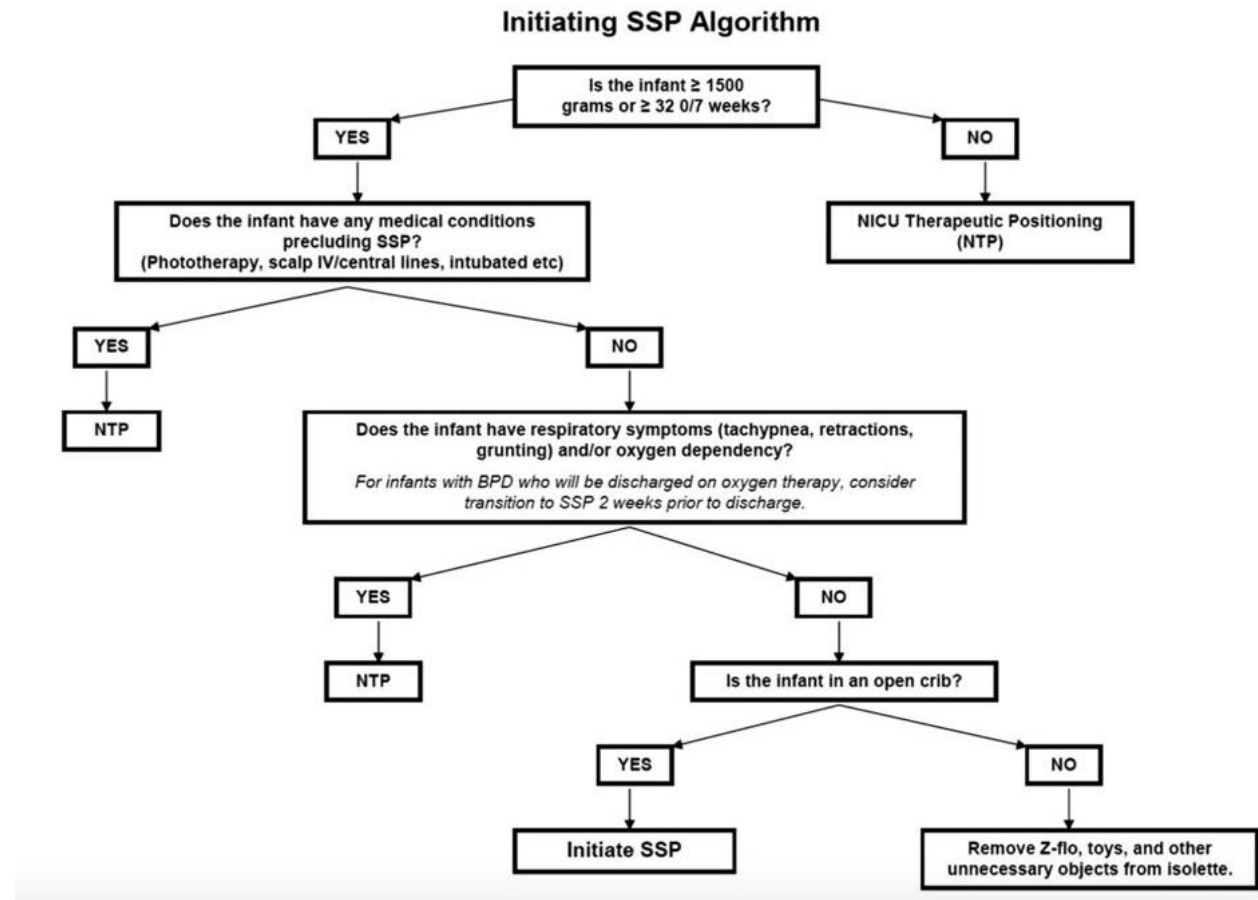
- **Back to Sleep** is recommended by the AAP and should be implemented prior to discharge.
- **Arms in or arms out** are both acceptable ways to swaddle an infant based on its needs.
- **Cold infants** are not happy infants. Dress infants appropriately and use extra blankets if necessary.
- **Keep unnecessary blankets, toys, and soft objects** out of the infant's bed space.
- **Tummy time** should be encouraged when alert and should be supervised by a parent or caregiver.
- **Opportunities for tummy time** are during an assessment or when a nurse is warming a feed.
- **Swaddling** is safe. Keep the blankets from going above the infant's shoulder line.
- **Look through the guideline** located on *SharePoint* for more detailed information on Back to Sleep.
- **Educate parents** on a safe sleep environment and practice with the parent crib card, DVD, and discussion.
- **Encourage the use of a pacifier.**
- **Prevent plagiocephaly** by encouraging tummy time when the infant is awake.



Integrating "Back to Sleep" into NICU Practice at UT Houston

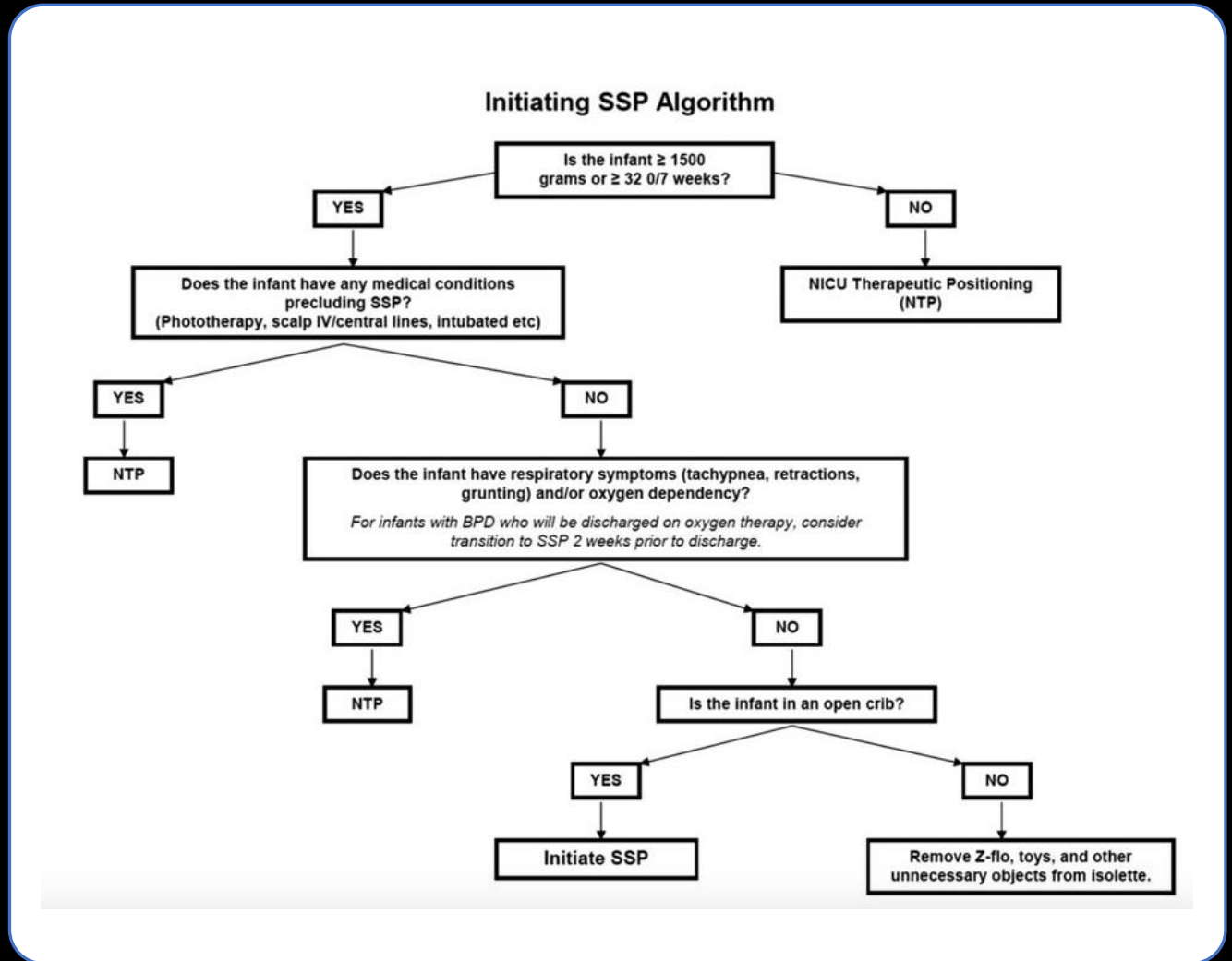
- NICU compliance with SSP improved
 - Supine position: 39% to 83%
 - Firm sleeping surface: 5% to 96%
 - Removal of soft objects from bed: 45% to 75%
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- Parental compliance with SSP post discharge improved from 23% to 82%

State-wide QI collaborative in MA NICUs



State-wide QI collaborative in MA NICUs

- Hwang et al, J Perinatol 2018



State-wide QI collaborative in MA NICUs

- Crib cards to designate sleep position and environment

“Safe to Sleep” Practices

The American Academy of Pediatrics Safe Sleep Practices include:

- Back to Sleep
- Use a firm flat mattress in a crib or bassinet
- No sleeping in carseats, swings, or other positioning devices
- No loose bedding, blankets or soft objects in crib
- No bumpers, pillows, or stuffed toys in the crib
- Do not over heat infants
- No co-sleeping in bed, sofa, or other areas

For more information from the American Academy of Pediatrics on how parents can create a safe sleep environment for their infants, please read the provided pamphlet and attend the NICU/SCN Discharge Class.

State-wide QI collaborative in MA NICUs

- Crib cards to designate sleep position and environment

Infant Therapeutic Positioning

- While your infant is hospitalized, he/she may be placed in positions other than the American Academy of Pediatrics "Safe to Sleep" Guidelines because of medical reasons. Sleep positions may include:
 - Stomach
 - Side-lying
 - Elevated head of bed
- Developmental positioning aids and/or blanket rolls may also be used for medical purposes.

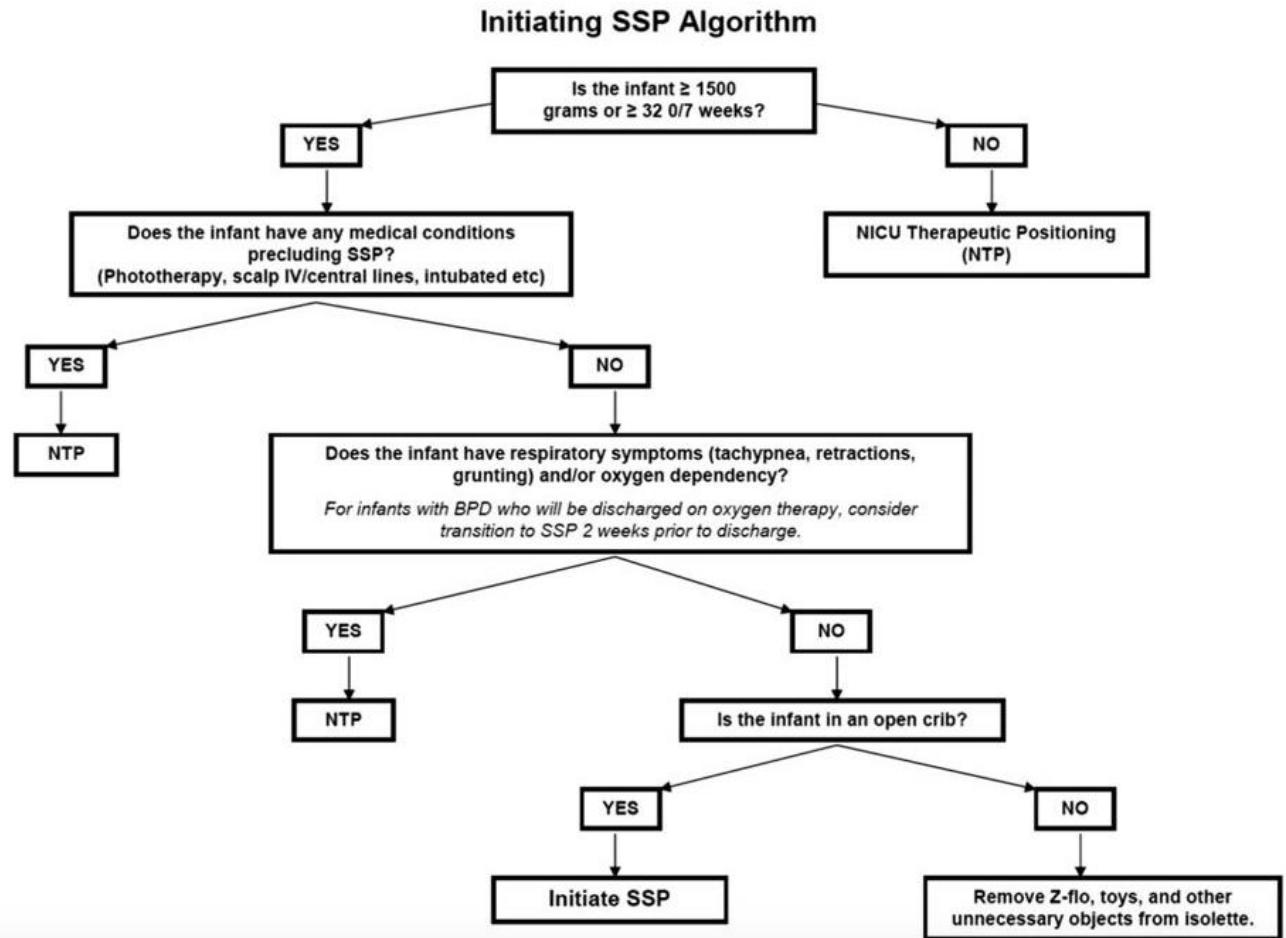
Therapeutic positioning is NOT recommended or safe for your infant at home

** Your infant will be introduced to Safe Sleep Practices when it is medically appropriate **

State-wide QI collaborative in MA NICUs

- Compliance with SSP in the NICUs increased from 47.7% to 81% in 2 years
- Compliance was highest for supine position and lowest for keeping cribs empty of soft objects and fluffy blankets

Suggested Safe Sleep implementation in our NICU



Safe Sleep Implementation in our NICU

- Laminated double sided crib cards

Safe Sleep Positioning:

Recommended by the American Academy of Pediatrics to reduce Sudden Infant Death Syndrome

I am ready for Safe Sleep Positioning

- Back to Sleep, no side lying positions, no HOB up
- NO extra blankets, toys, or soft objects in the crib
- Snug fitting hat if needed for thermoregulation or no Hat
- Sleep sacks are recommended. Swaddling is safe, but discontinue when I can roll over.
- Pacifiers are ok
- Prevent head flattening by encouraging ***supervised Tummy Time*** during the day before feedings, when I am awake. OT approved head pillows only.


Safe Sleep Implementation in our NICU

- Laminated double sided crib cards

NICU Therapeutic Positioning

I am NOT ready for Safe Sleep Positioning because I have:

- Nasal CPAP or HFNC simulating CPAP
- Mechanical Ventilation
- Central Lines
- A need for developmental positioning support at this time

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- While your infant is hospitalized, they may be placed in positions other than the AAP's "Safe to Sleep" guidelines. Positions may include on their stomach (prone), side-lying, elevated head of bed.
 - Developmental positioning aids and/or blanket rolls may also be used for medical purposes.
 - **Therapeutic positioning is not recommended or safe for your infant at home.**
 - **Your infant will be introduced to Safe Sleep Practices when it is medically appropriate.**



Important
educational points
to parents

What we will be tracking through this project:

- Is there a safe sleep card on the bed/crib?
- Is the presented side of the card correctly following safe sleep guidelines?
- Has the parent been educated on Safe Sleep Practices?
- When was the infant placed on Safe Sleep Practices?
- Once infant qualifies for Safe Sleep:
 - HOB flat
 - Supine position
 - No additional blankets/toys in bed
 - No hat or snug fitting hat
 - OT approved pillow only





Thank you