



Bexar County Crisis:
The Preventable
Infant Death Story

Sanjie Garza-Cox, MD

Disclosures

- B.E.S.T. – Baby Education for South Texas is a 501c3 non-profit, President
- Otherwise, I have no financial relationships or conflicts of interests to disclose

Objectives

- Define the terms Sudden Infant Death Syndrome (SIDS), Sudden Unexpected Death Syndrome (SUID), and Accidental Suffocation / Strangulation in Bed (ASSB)
- Discuss how SUID includes an interaction between a vulnerable infant and an asphyxiating and/or overheating environment
- Stress the importance of safe sleep practices in reducing the risk for SUID and ASSB
- Discuss Bexar County statistics, history of efforts & current regional plan to effect change

Background

Sudden Unexpected Infant Death (SUID)

- Death of an infant younger than 1 year of age
- Occurs suddenly and unexpectedly
- Classified as Explained or Unexplained after thorough investigation including:
 - Complete autopsy
 - Examination of the death scene
 - Interview of all the family members and other people present at the time of death
 - Review of clinical and medical history

SUID

Explained

Trauma/Drowning

Ingestion

**Known Medical
Conditions**

**Accidental
Suffocation /
Strangulation in
Bed**

Unexplained

SIDS

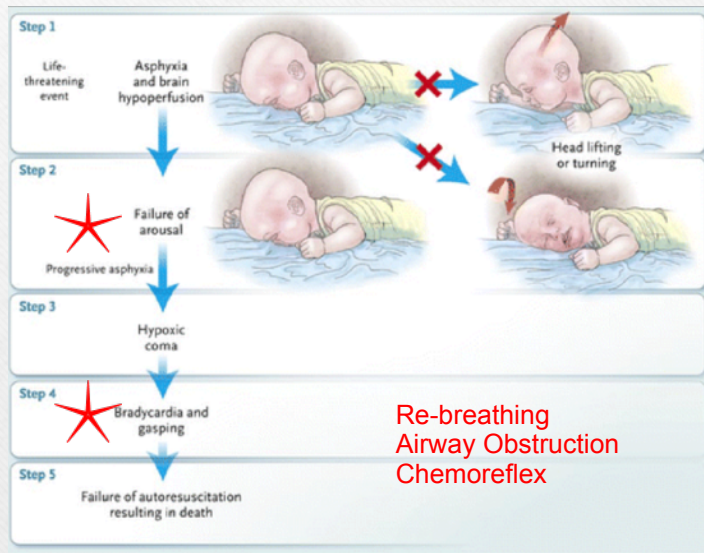
Undetermined



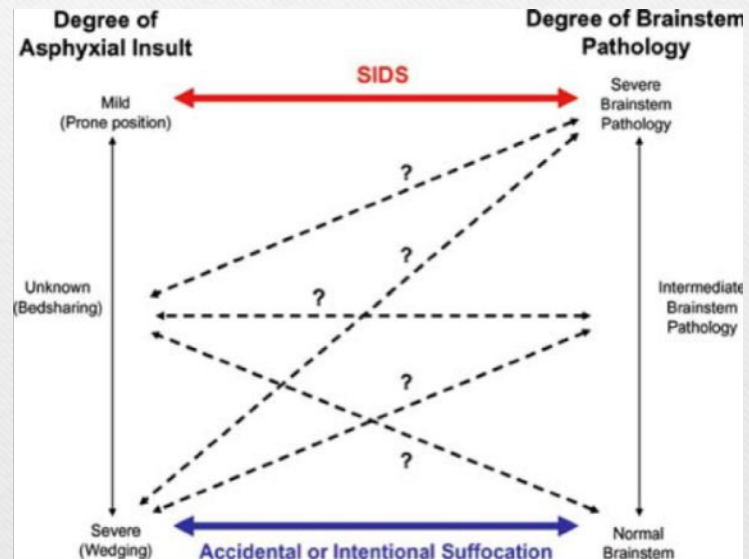
Accidental Suffocation Strangulation in Bed (ASSB)

- Asphyxia - situation in which O₂ decreases and CO₂ increases:
 - Infant stops breathing - Apnea
 - His airway becomes obstructed
 - He re-breathes air
- Asphyxia has always been a part of SIDS
- In some asphyxiating environments any infant could die; but in most situations, infants do not die

Asphyxia Challenge Response



Adapted from Kinney and Thach, NEJM, 2009



Adapted from Randall. Forensic Sci Med Pathol, 2009

Re-enactment Scenes

Suffocation by Soft Bedding



Wedging or Entrapment



Strangulation



Overlay with Bed-Sharing



SUID in Summary

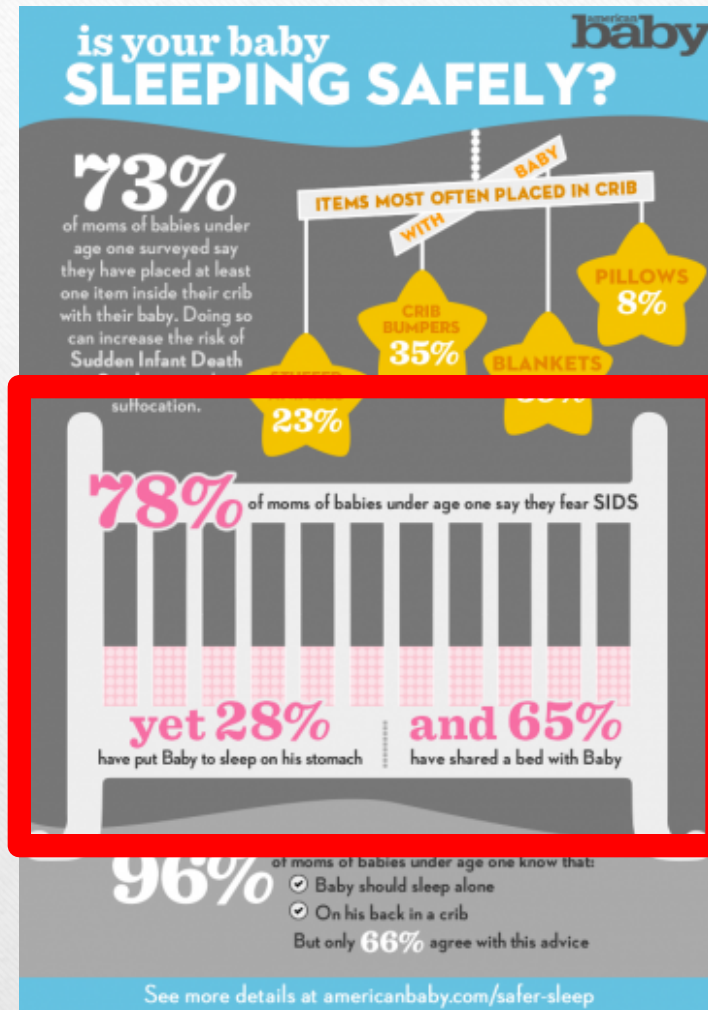
- A **vulnerable** infant cannot mount a protective response to an asphyxia event or overheating
- A **non-vulnerable** infant is also a risk when placed in a highly asphyxiating environment
- The cause of death is typically multi-factorial
- *By eliminating unsafe sleep environments and exposures, the risk for SUID can be reduced*

What are we up against?

96% of moms of babies under age one know that:

- ✓ Baby should sleep alone
- ✓ On his back in a crib

But only 66% agree with this advice



But, we slept on our
belly and we all did
well...



If my baby throws up and she is on her back, she will choke....

ORIENTATION OF THE TRACHEA TO THE ESOPHAGUS

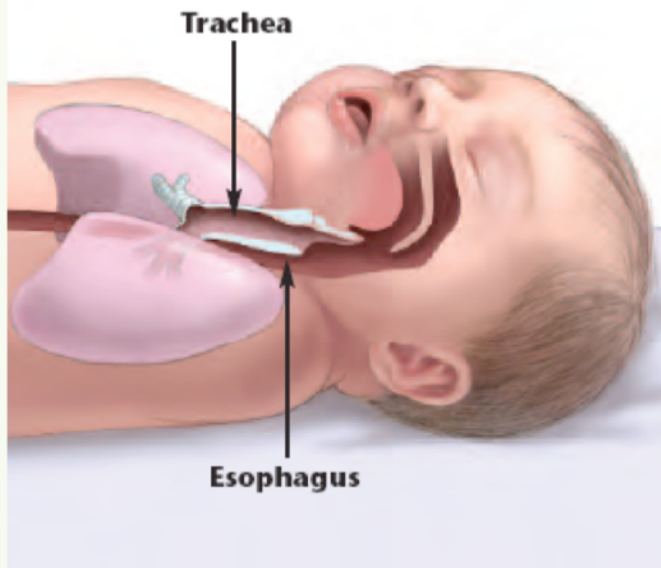


Figure 3.
Upper-Respiratory Anatomy: Baby
in the Back Sleeping Position

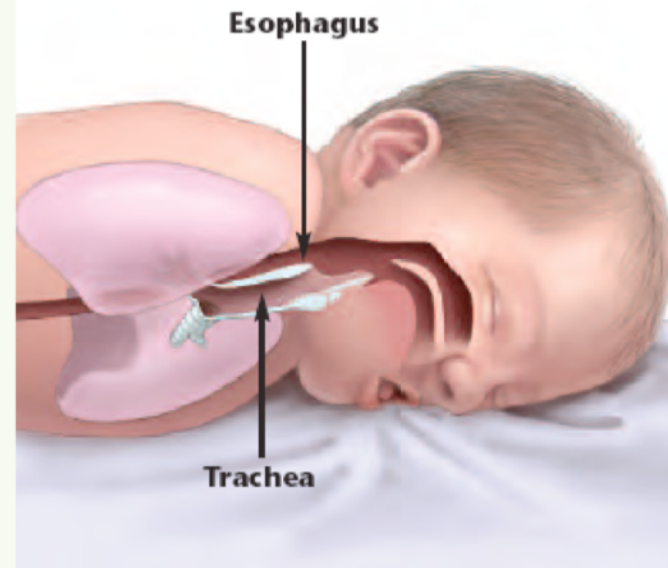


Figure 4.
Upper-Respiratory Anatomy: Baby
in the Stomach Sleeping Position

But his head will get flat...

The Magic of TUMMY TIME!!

Before You Start:

- Baby awake and alert
- Use a firm surface
- Baby should be supervised at all times

BRAIN

- Sensory integration
- Cognitive development
- Environmental awareness

HEAD

- Prevents flat head syndrome (plagiocephaly)

NECK

- Strengthens neck muscles
- Improves head control

EYES

- Visual motor development
- Depth perception

BACK

- Posture strength
- Back strength
- Skeletal alignment

ARMS

- Strengthens arms for reaching and crawling

LEGS

- Helps develop muscles for crawling

HIPS

- Stretches/develops hips muscles

TUMMY

- Helps with tummy issues (gas, constipation)

HANDS

- Formation of hand arches for fine motor skills

Include in Daily Activities:

- Towel drying after bath
- After diaper changes
- Burping over parent's lap
- On parent's chest
- Lotion/Massage
- Playing "airplane"
- Mirror play

babybegin
www.babybegin.com



Product Availability

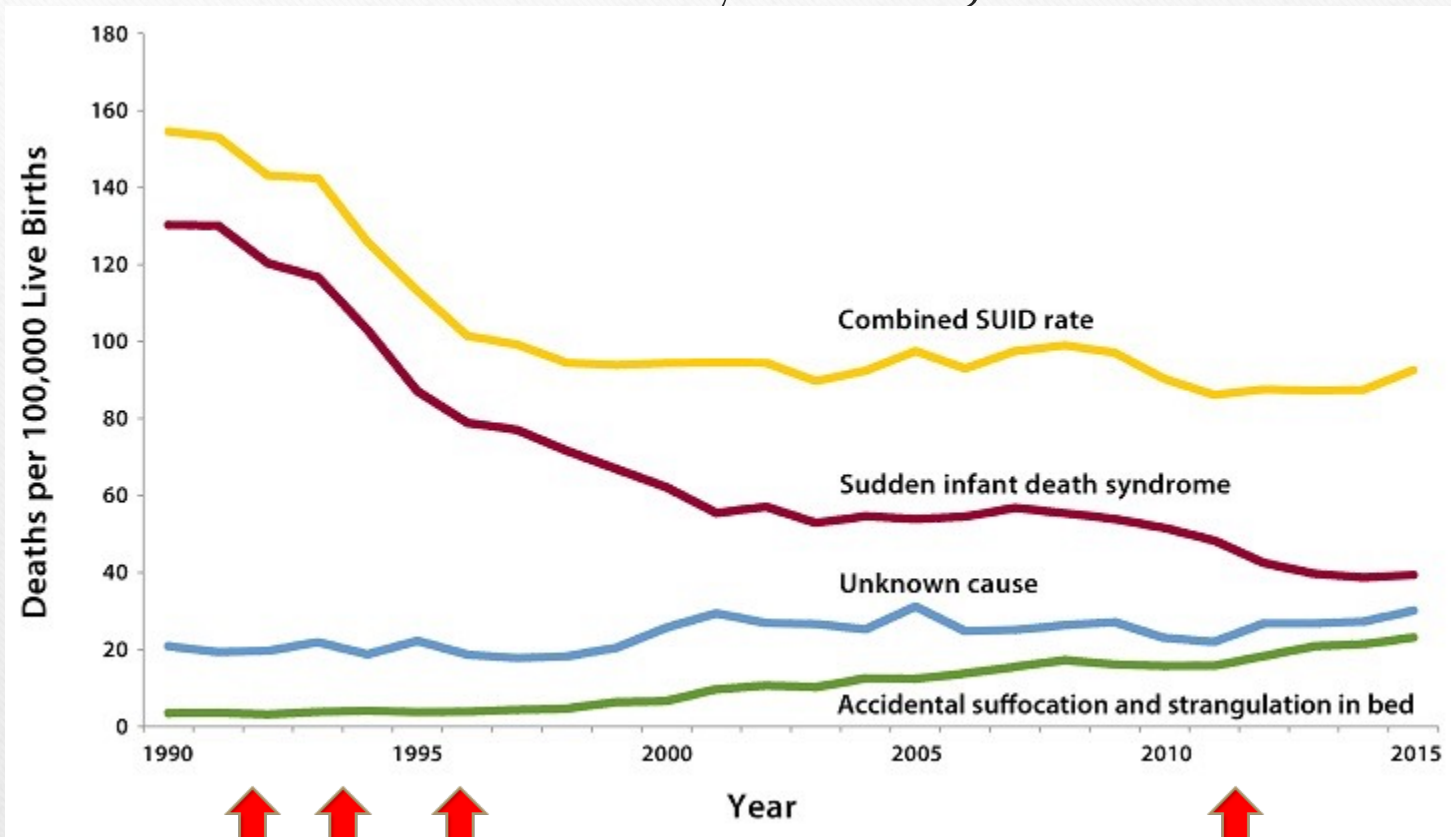


Advertisements and Celebrities



Data

Trends in SUID by Cause, 1990-2015



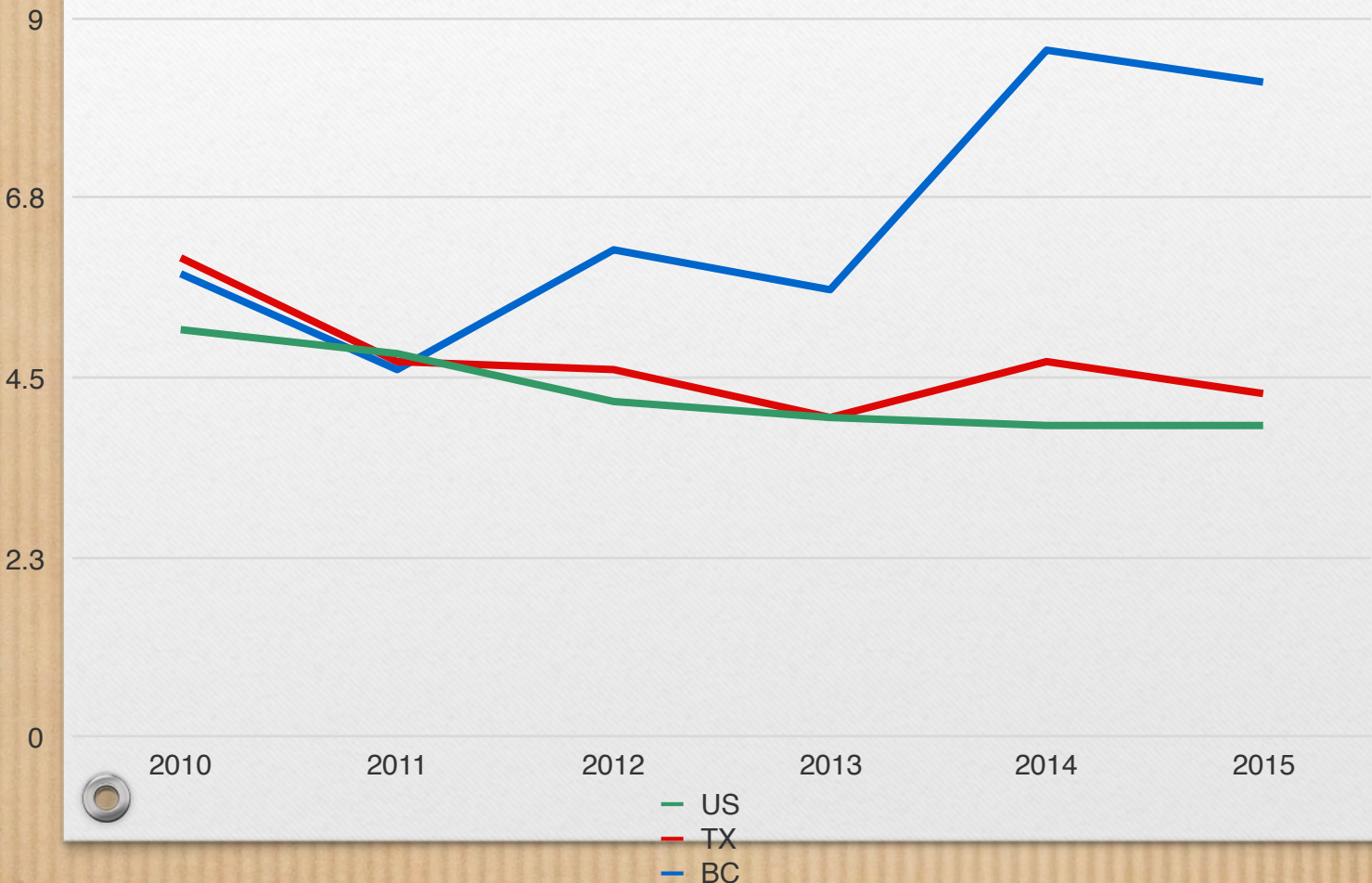
Safe Sleep Back to Sleep Investigation Reporting Form Safe to Sleep

Sudden Unexpected Infant Deaths (SUID) in Bexar County

Deaths per 10,000 Live Births

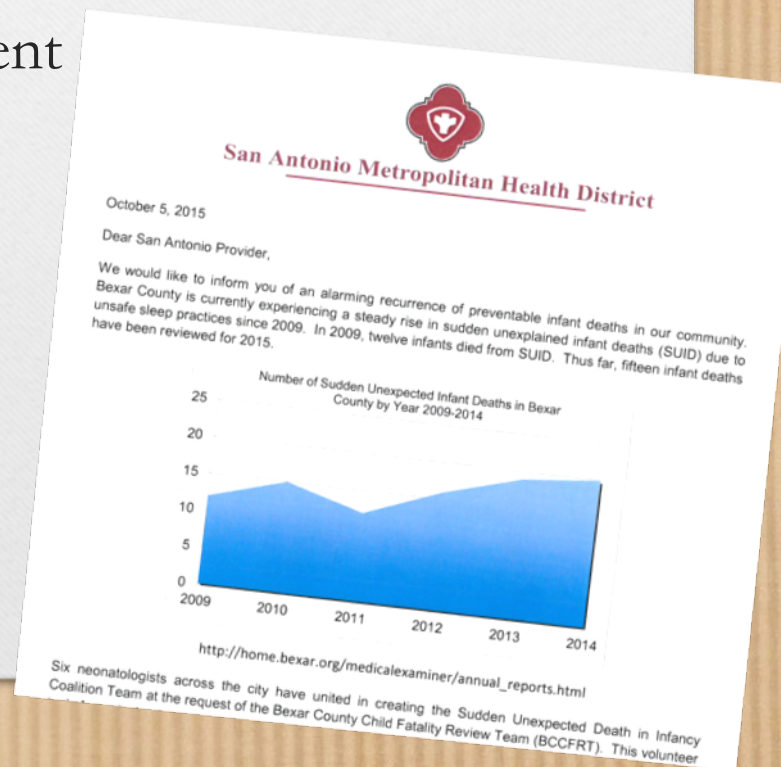
Births –
2010 – 26,078
2011 – 25,823
2012 – 26,283
2013 – 26,820
2014 – 27,792
2015 – 28,182

Deaths –
2010 – 15
2011 – 12
2012 – 16
2013 – 15
2014 – 24
2015 – 23



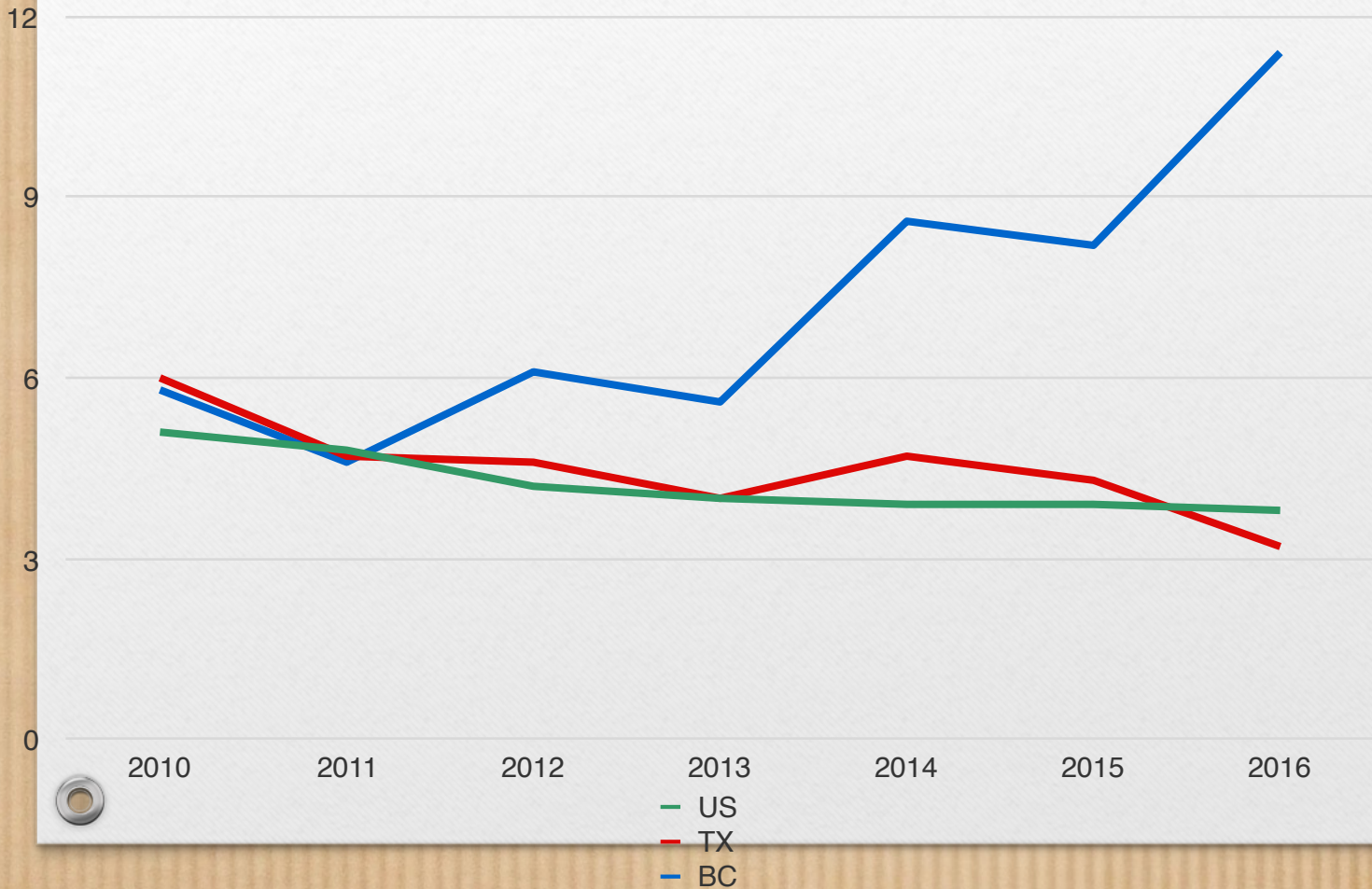
Safe Sleep Coalition County-Wide Initiative

- Standardization of educational materials and videos
- Standardization of EMR documentation
- **Modeling** of safe sleep environment
- ALL NBN & NICU units
- SA Metro Health letter of urgency all providers
- Collaboration with community



Sudden Unexpected Infant Deaths (SUID) in Bexar County

Deaths per 10,000 Live Births



Births –
2010 – 26,078
2011 – 25,823
2012 – 26,283
2013 – 26,820
2014 – 27,792
2015 – 28,182
2016 – 27,968

Deaths –
2010 – 15
2011 – 12
2012 – 16
2013 – 15
2014 – 24
2015 – 23
2016 – **32**

B.E.S.T. - Baby Education for South Texas

(a 501c3 Nonprofit organization)



- **Mission:**
 - Improving the health and well-being of infants and ensure they have the best environment in which to thrive
- **Goal:**
 - Decrease infant mortality and promote healthy development by identifying modifiable risk factors, supporting community resources, and enhancing health education, advocacy, and awareness

NON-PROFIT BYLAWS OF BABY EDUCATION FOR SOUTH TEXAS (B.E.S.T.)

PREAMBLE

The following Bylaws shall be subject to, and governed by, the Non-Profit Corporation Act of Texas and the Articles of Incorporation of Baby Education for South Texas (B.E.S.T.). In the event of a direct conflict between the herein contained provisions of these Bylaws and the mandatory provisions of the Non-Profit Corporation Act of Texas, said Non-Profit Corporation Act shall be the prevailing controlling law. In the event of a direct conflict between the provisions of these Bylaws and the Articles of Incorporation of Corporation/Organization, it shall then be these Bylaws which shall be controlling.

ARTICLE 1 – NAME

The legal name of the Non-Profit Corporation/Organization shall be known as Baby Education For South Texas (B.E.S.T.), and shall herein be referred to as the "Corporation/Organization."

ARTICLE 2 – PURPOSE

The general purposes for which this Corporation/Organization has been established are as follows:

The purpose for which the Non-Profit Corporation is formed is set forth in the attached Articles of Incorporation.

The Corporation/Organization is established within the meaning of IRS Publication 557 Section 501(c)(3) Organization of the Internal Revenue Code of 1986, as amended (the "Code") or the corresponding section of any future federal tax code and shall be operated exclusively for the mission of improving the health and well-being of infants and ensure they have the best environment in which to thrive. the organization's goal is to decrease infant mortality and to promote healthy development by identifying modifiable risk factors, supporting community

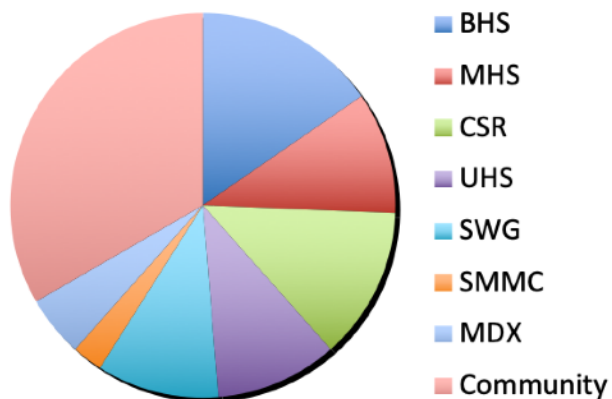
May 16th, 2016



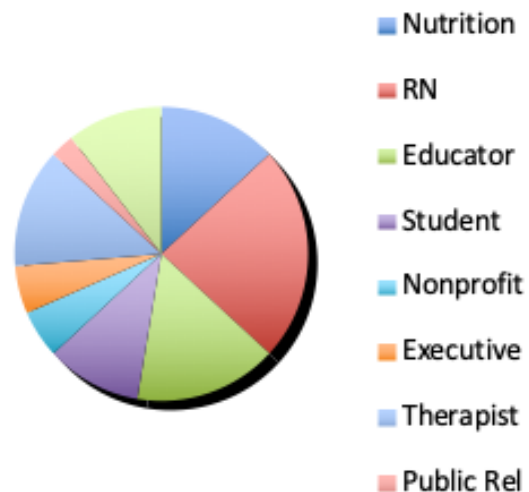
B.E.S.T.

Community Partnership

Organization



Occupation



+ Attorney, Accountant, Financial Investor

Cribs for Kids® Safe Sleep Hospital Certification

I. Certified Safe Sleep Hospital



Requirements:

- **Develop a safe sleep policy statement** incorporating the AAP's Infant Safe Sleep guidelines.
- **Train staff** on safe sleep guidelines, your hospital's safe sleep policy and the importance modeling safe sleep for parents.
- **Educate** parents on the importance of safe sleep practices, and implement these practices in the hospital setting.



II. Certified Safe Sleep Leader



Requirements:

- **Develop a safe sleep policy statement** incorporating the AAP's Infant Safe Sleep guidelines.
- **Train staff** on safe sleep guidelines, your hospital's safe sleep policy and the importance modeling safe sleep for parents.
- **Educate** parents on the importance of safe sleep practices, and model those practices in the hospital setting.
- **Replace regular receiving blankets** in nursery and NICU with wearable blankets to model no loose bedding in the crib.
- **Evaluation** annually through internal audit or PDSA cycles.

III. Certified Safe Sleep Champion



Requirements:

- **Develop a safe sleep policy statement** incorporating the AAP's Infant Safe Sleep guidelines.
- **Train staff** on safe sleep guidelines, your hospital's safe sleep policy and the importance modeling safe sleep for parents.
- **Educate** parents on the importance of safe sleep practices, and model those practices in the hospital setting.
- **Replace regular receiving blankets** in nursery and NICU with wearable blankets to model no loose bedding in the crib.
- **Affiliate** with or become a local Cribs for Kids® partner and provide safe sleep alternatives to at risk parents in your community.
- **Provide community and media outreach** on safe sleep in your community.
- **Evaluation** annually through internal audit or PDSA cycles.



B.E.S.T. Initiatives



Direct on Scene Education - DOSE

Bexar County area First Responders were trained to identify infant safe sleep hazards, educate families and provide resources while responding to emergency and non-emergency calls.

B.E.S.T. Educational Syllabus

20+ educational modules created to support our community. Library of videos on best4baby.org

Cribs for Kids® Safe Sleep Hospital Certification

80% of Bexar County hospitals have been certified.

100% of NICU/MBUs have standardized safe sleep education policies.

Sleep Kits & Safe Sleep Education



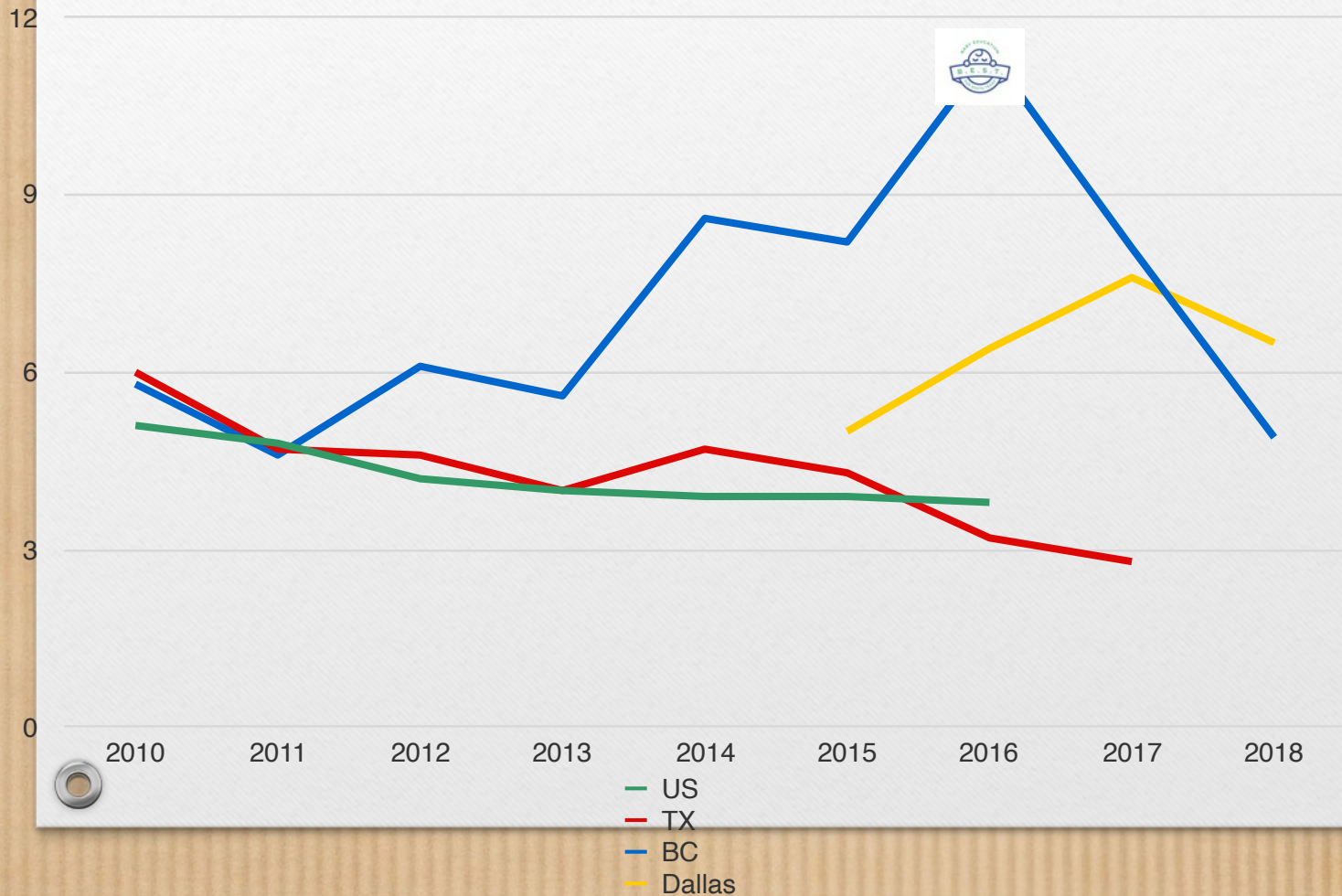
COMMUNITY

Coalition working to save Bexar County babies by preventing crib deaths



Sudden Unexpected Infant Deaths (SUID) in Bexar County

Deaths per 10,000 Live Births



BC Live Births

2010 – 26,078
 2011 – 25,823
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BC SUID

2010 – 15
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 2017 – 22
 2018 – 13

From Bexar County to Regional Expansion

Unintended Consequences: Reducing Accidental Injuries for South Texas Infants

Sanjuanita Garza-Cox¹, MD, Devon George², Amanda Miller³, Jared Adney⁴, Nicholas Carr¹, DO

¹Baby Education for South Texas, 501c3

²Cribs for Kids®, Pittsburgh, PA

³HALO Innovations Inc., Minnetonka, MN



THE PROBLEM:

Sudden Unexpected Infant Deaths (SUID) is the leading cause of preventable infant mortality and morbidity across the US, with an incidence of 91.4/100,000 live births. The reported prevalence throughout the Southwest Texas region far exceeds those reported for all Texas and the US.

To combat the increasing incidence, the AAP published a policy statement in 2016 recommending delivery facilities endorse and model Safe Sleep environments during initial newborn hospitalization to reduce SUID.

Over 50,000 infants are delivered within the South Texas region annually, most without formal policies for safe sleep.



OUR AIMS:

Phase One (Data Collection):

- To identify existing program and policies at delivery centers within the Southwest Texas Region (*Electronic Survey of STRAC facilities*)

Phase Two (Implementation):

- To facilitate the standardization of new parent and community education regarding SUID within the Southwest Texas Region (*Cribs for Kids Hospital Certification program*)

Phase Three (Maintenance):

- Coordinate with STRAC and community child fatality review team tracking of reported cases of SUID annually for state report and progress



S.M.A.R.T. Goals Defined

- S** • Specific (Clear, concise, tangible)
- M** • Measurable (Dollars, volume, time, experiences)
- A** • Actionable (You can do something to actually make this happen)
- R** • Realistic (50% realistic is fine)
- T** • Timed – (Deadlines announced, committed to)

OUR AIMS:

Phase One (Data Collection):

1. To identify existing programs and policies at delivery centers within the Southwest Texas region (*Electronic Survey of STRAC facilities*)

SMART Aim 1: Identify ALL regional delivery center current practices regarding Safe Sleep Education within 45 days (December 2019)

- Utilize existing communication streams and online survey administration of existing programs and policies at Southwest Texas delivery centers.
- Survey to include whether formal policies and educations are in place, what resources are available from facility, what resources are available from local community, and what barriers exist for implementation of programs.
- Reporting of survey results within **3 months** of administration at Perinatal STRAC meeting



Phase 1: Baseline Data

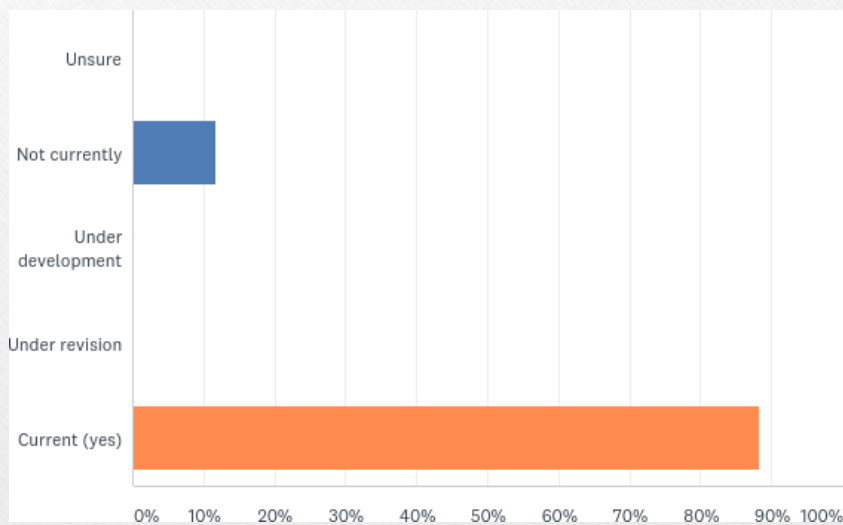
STRAC / Baby Education for South Texas
(BEST) Regional QI Project to Improve Infant
Health

Monday, December 02, 2019

Current Status of Safe Sleep Initiative

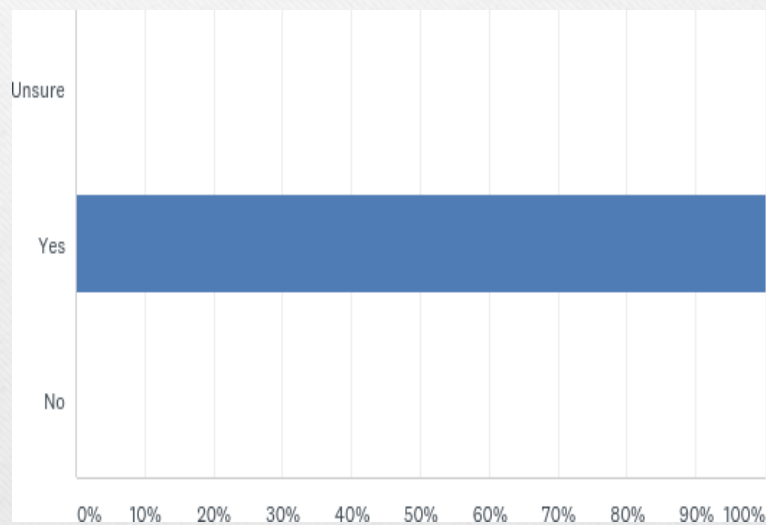
Specific Policies & Programs in Place

Q1: Does your facility have a unit-specific safe sleep policy?



Hospital Education in Place

Q3: Does your facility provide safe sleep education prior to discharging a baby home?

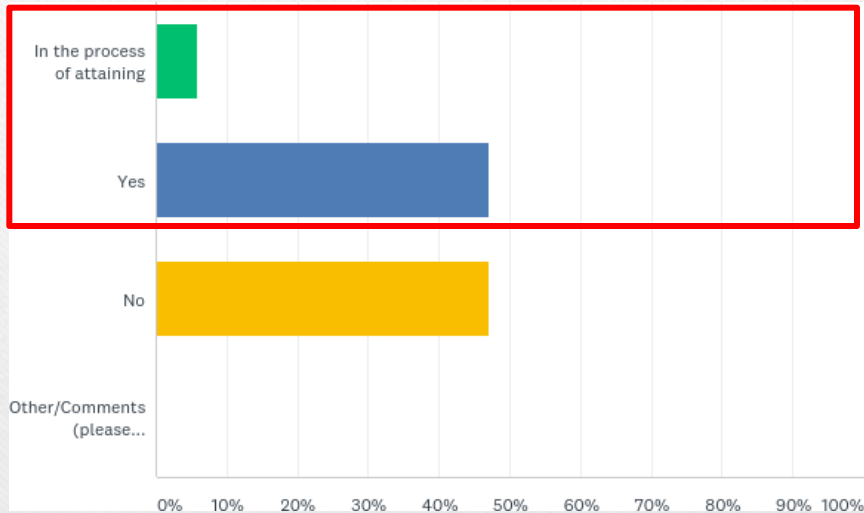


*Goal is >90% before March 2020 (6 months)

Current Status of Safe Sleep Initiative

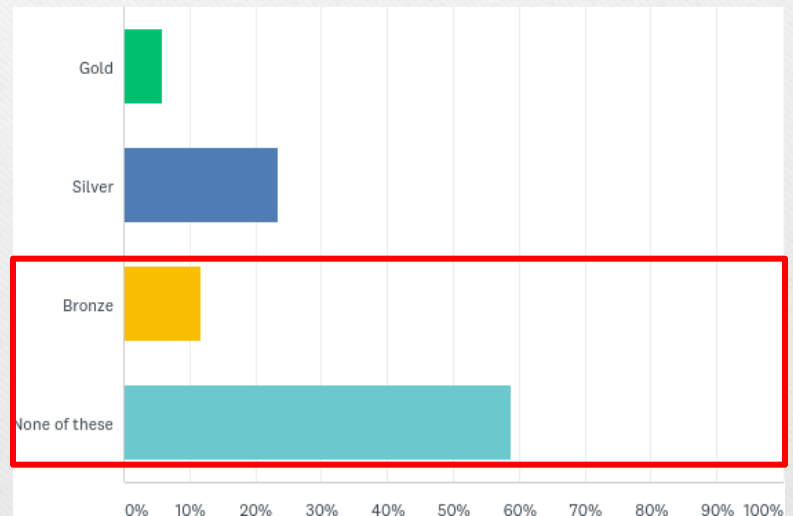
Hospital Certification

Q4: Has your facility attained safe sleep hospital certification?



Distribution of Hospital Certification

Q5: Please indicate which certification level your facility has attained or is in the process of attaining.



*Goal is >90% before Sept 2020 (12 months)

Cribs for Kids® Safe Sleep Hospital Certification

I. Certified Safe Sleep Hospital



Requirements:

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- **Train staff** on safe sleep guidelines, your hospital's safe sleep policy and the importance modeling safe sleep for parents.
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II. Certified Safe Sleep Leader



Requirements:

- **Develop a safe sleep policy statement** incorporating the AAP's Infant Safe Sleep guidelines.
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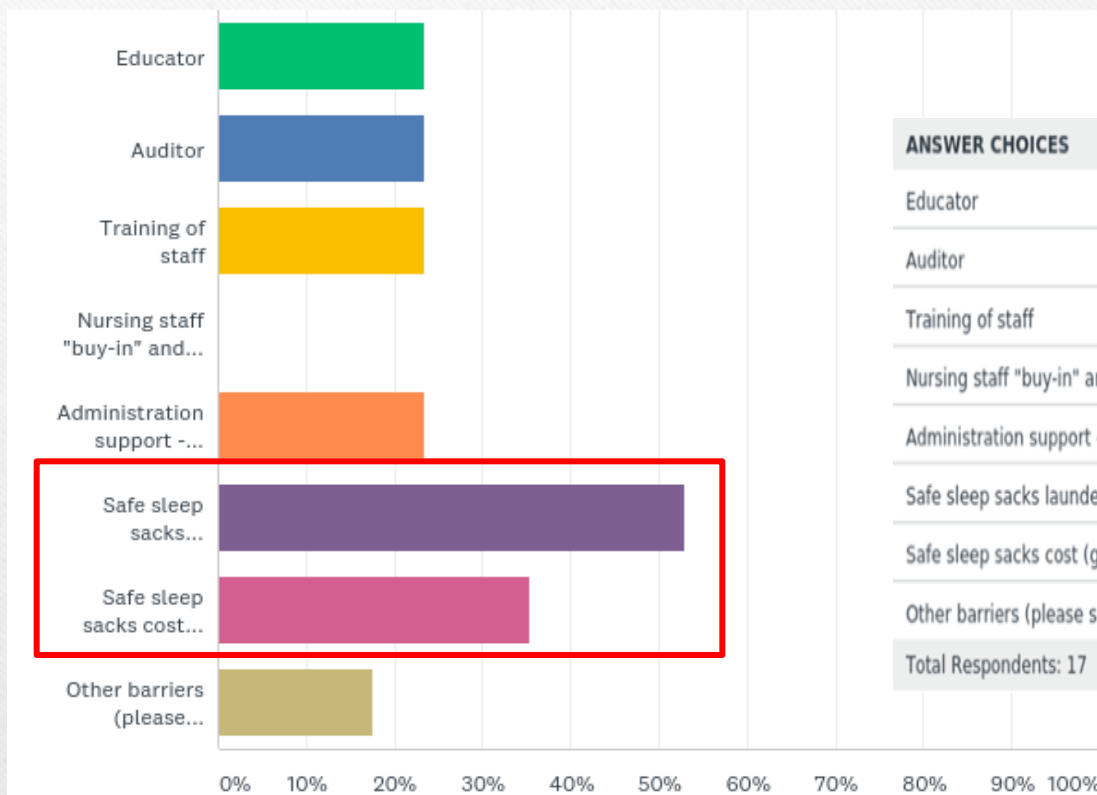
III. Certified Safe Sleep Champion



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- **Train staff** on safe sleep guidelines, your hospital's safe sleep policy and the importance modeling safe sleep for parents.
- **Educate** parents on the importance of safe sleep practices, and model those practices in the hospital setting.
- **Replace regular receiving blankets** in nursery and NICU with wearable blankets to model no loose bedding in the crib.
- **Affiliate** with or become a local Cribs for Kids® partner and provide safe sleep alternatives to at risk parents in your community.
- **Provide community and media outreach** on safe sleep in your community.
- **Evaluation** annually through internal audit or PDSA cycles.

Q6: What barriers exist that may impede safe sleep certification? (choose all that apply)



| ANSWER CHOICES | RESPONSES |
|---|-----------|
| Educator | 23.53% 4 |
| Auditor | 23.53% 4 |
| Training of staff | 23.53% 4 |
| Nursing staff "buy-in" and modeling of safe sleep | 0.00% 0 |
| Administration support - overall cost | 23.53% 4 |
| Safe sleep sacks laundering (gold and silver certification) | 52.94% 9 |
| Safe sleep sacks cost (gold and silver certification) | 35.29% 6 |
| Other barriers (please specify) | 17.65% 3 |
| Total Respondents: 17 | |

Phase 2: Safe Sleep Certification

STRAC / Baby Education for South Texas
(BEST) Regional QI Project to Improve Infant
Health

Monday, December 02, 2019

S.M.A.R.T. Goals Defined

- S** • Specific (Clear, concise, tangible)
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- A** • Actionable (You can do something to actually make this happen)
- R** • Realistic (50% realistic is fine)
- T** • Timed – (Deadlines announced, committed to)

OUR AIMS:

Phase Two (Implementation):

1. To facilitate the standardization of new parent and community education regarding Sudden Unexpected Infant Death within the Southwest Texas region (*Cribs for Kids Hospital Certification program*)

SMART Aim 1: Implement Standardized Safe Sleep Education policies in > 90% regional delivery centers within 6 months

SMART Aim 2: Achieve > 90% regional delivery center designation for Safe Sleep Certification by the Cribs for Kids program with 12 months

- Utilize existing partnerships with Cribs for Kids
- nonprofit organization to assist with delivery centers achieving minimum bronze level certification
- Report update every 3 months at Perinatal STRAC meeting.





About The Program

The **National Safe Sleep Hospital Certification Program** was created by Cribs for Kids and is endorsed by leading health and safety organizations. Its goal is to award recognition to hospitals that demonstrate a commitment to community leadership for best practices and education in infant sleep safety. By becoming certified, a hospital is demonstrating that it is committed to the mission of making babies as safe as possible in their sleep environments and eliminating as many sleep related deaths as possible



Certified Safe Sleep Hospital

REQUIREMENTS

- Develop a safe sleep policy statement incorporating the AAP's Infant Safe Sleep guidelines.
- Train staff on safe sleep guidelines, your hospital's safe sleep policy, and the importance of modeling safe sleep for parents.
- Educate parents on the importance of safe sleep practices, and implement these practices in the hospital setting.



Certified Safe Sleep Champion

REQUIREMENTS

- Develop a safe sleep policy statement
- Train staff
- Educate parents
- Replace regular receiving blankets
- Program Evaluation
- Provide community and media outreach on safe sleep in your community.
- Affiliation with or become a Cribs for Kids® partner and provide a safety-approved sleep alternative to at risk parents in your hospital.



Certified Safe Sleep Leader

REQUIREMENTS

- Develop a safe sleep policy statement
- Train staff
- Educate parents
- Replace regular receiving blankets in nursery and/or NICU with wearable blankets to model no loose bedding in the crib.
- Program Evaluation annually through internal audit of PSDA Cycles.

Resources

www.cribsforkids.org/hospitalcertification/

To apply for certification visit:

<https://cribsforkids.org/hospitalcertification/#hospitalcertificationapplicationmodal>

For additional resources visit: <https://cribsforkids.org/hospitalcertificationtoolkit/>

Hospital Certification Point of Contact:

[Devon George, MSN at dgeorge@cribsforkids.org](mailto:dgeorge@cribsforkids.org), (412) 322-5680 x 112



Free In-Hospital Safe Sleep Modeling Program for the Birth Center, NICU & PICU.

- FREE* annual supply of HALO SleepSack swaddlers for in-hospital use only.
- We support hospitals who do not swaddle with a FREE* supply of the HALO SleepSack wearable blankets.
- Complimentary safe sleep educational materials for parents and staff training.
- Participation qualifies your hospital for the highest level of [National Safe Sleep Certification \(Silver & Gold\) sponsored by Cribs for Kids.](#)
- Improve your Birth Center and NICU experience for families to boost satisfaction scores.
- Marketing and public relations support materials to promote your hospital's safe sleep practices.

*Certain restrictions apply. Shipping charges apply.

Resources

<http://www.halosleep.com/in-hospital-safe-sleep-modeling-program/>

Hospital Contact: Suzy Magill

suzy@halosleep.com; ☎ 720-880-8865



Program Level (Regional) Qualification

QUICK WIN for **BRONZE**?

-Standardized regional policy **TEMPLATE**

Striving for **SILVER** or **GOLD**?

-Easy internal audit system with **STRAC** reporting

-Take Home vs. In-Hospital *Sleep Sack Program*

-**Coordinated community outreach and education**

Safer Sleeping Environments

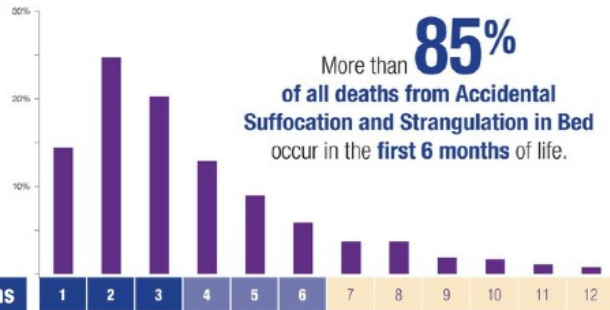


What to do?

- Ask about sleeping environment at every encounter
- Reinforce Safe to Sleep® recommendations
- Educate about current crisis – make it personal
- Consistent use of materials:
 - <https://www.nichd.nih.gov/sts/materials/Pages/default.aspx>
- Become a Champion in every avenue offered – hospital, local, regional

Accidental Suffocation and Strangulation during Infant Sleep

Accidental Suffocation and Strangulation in Bed, or ASSB, occurs when something limits a baby's breathing like when soft bedding or blankets are against their face or when a baby gets trapped between two objects, such as a mattress and wall. Among babies, accidental suffocation is responsible for three quarters of all unintentional injury deaths.



Age in months

Most of these deaths occur in the first 3 months of life.

Deaths from ASSB are less common in babies older than 6 months.



Follow safe sleep recommendations until baby's first birthday to reduce the risk of SIDS and other sleep-related causes of infant death.

Learn more
<http://safetosleep.nichd.nih.gov>

To reduce the risk of Accidental Suffocation and Strangulation in Bed:

- ▶ Always place baby on his or her back to sleep for all sleep times, including naps.
- ▶ Room share—keep baby's sleep area in the same room next to where you sleep.
- ▶ Baby needs his or her own sleep area and should not sleep on a couch, chair, or adult bed.
- ▶ Use a firm sleep surface that is free from soft objects, toys, blankets, and crib bumpers.



NIH Eunice Kennedy Shriver National Institute of Child Health and Human Development

Sources: Centers for Disease Control and Prevention #MMWR 2012; 61(15):279-276. Technical Report of the American Academy of Pediatrics Task Force on Sudden Infant Death Syndrome.

Create a Safe Sleep Environment for Baby

Did you know that the features of your baby's sleep area can affect his/her risk for **Sudden Infant Death Syndrome (SIDS)** and other sleep-related causes of infant death, such as suffocation?

Reduce the risk of SIDS and other sleep-related causes of infant death by **creating a safe sleep environment** for your baby.

How can you make a **safe sleep environment**?



- ▶ Always place baby **on his or her back** to sleep for all sleep times, including naps.



- ▶ Have the baby **share your room, not your bed**. Your baby should not sleep in an adult bed, on a couch, or on a chair alone, with you, or with anyone else. Try room sharing—keeping baby's sleep area in the **same room** next to where you sleep.



- ▶ Use a **firm sleep surface**, such as a mattress in a safety-approved* crib, covered by a fitted sheet.



- ▶ Keep soft objects, toys, pillows, crib bumpers, and loose bedding **out of your baby's sleep area**.



- ▶ Dress your baby in **no more than one layer of clothing more than an adult would wear** to be comfortable, and leave the blanket out of the crib. A one-piece sleeper or wearable blanket can be used for sleep clothing. Keep the room at a temperature that is comfortable for an adult.



Safety-approved* portable play yards can also provide a safe sleep environment for your baby. When using a portable play yard, always place baby to sleep on his or her back and keep toys, pillows, and blankets out of the play yard. These actions help reduce the risk of SIDS and other sleep-related causes of infant death.

*Visit the U.S. Consumer Product Safety Commission website for more information about safety-approved baby sleep areas: <http://www.cpsc.gov/en/Safety-Education/Safety-Education-Centers/cribs/>



NIH Eunice Kennedy Shriver National Institute of Child Health and Human Development



Learn more about ways to reduce the risk of SIDS and other sleep-related causes of infant death at <http://safetosleep.nichd.nih.gov>

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