

# **Analysis of Sudden Infant Death Syndrome Prevention Based on Sleep Quality**

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## **Abstract**

*This article uses a computer to retrieve clinical decisions, recommended practices, evidence summaries, clinical practice guidelines, technical reports, expert consensus, etc., related to infant safe sleeping environments from websites such as BMJ Best Clinical Practice, UpToDate Clinical Consultant, JBI Library, Cochrane Library, etc. In a systematic review, the evidence is extracted and summarized according to the theme after the methodological quality evaluation. This study outlines the best proof of a safe sleeping environment for babies and puts forward practical recommendations from 4 aspects: sleeping posture, sleeping position, sleeping environment, and auxiliary sleep tools. It encourages medical staff and infant guardians to follow the best evidence and standardize infant care practices. The next step will be to conduct applied research on the best evidence for infants' safe sleeping environment, promote the implementation and implementation of evidence, ensure the safety of infants' sleeping environment, and prevent SIDS.*

**Keywords:** *Baby, Sleep safety, Sleeping environment, Sudden death*

## **1. Introduction**

Sudden Infant Death Syndrome (Sudden Infant Death Syndrome, SIDS) refers to the sudden death of infants under 1-year-old, which mainly occurs in infants' sleep. After a comprehensive case investigation, the cause of death cannot be explained [1]. SIDS is the main cause of death for infants (28 days to 1 year old) within one year after the neonatal period, with an incidence of about 0.05% [2]. In the United States, about 3,500 sleep-related infant deaths occur each year, including SIDS, accidental asphyxia, etc. [3]. In China, SIDS is also the leading cause of infant deaths after the neonatal period, accounting for 15% to 20% of infant deaths, second only to pneumonia and congenital malformations [4]. The occurrence of SIDS is closely related to sleep. Using correct and effective methods to promote infant sleep safety are essential measures to prevent SIDS [5]. The American Academy of Pediatrics (AAP) released a technical report on promoting infant sleep safety to prevent SIDS in 2011 and has been continuously updated. BMJ Best Clinical Practice and UpToDate clinical consultants also released clinical decision-making recommendations. However, this evidence is significant in length, scattered in content, lacks focus and refinement on the theme of the sleep environment, and lacks a brief and easy-to-read practical guide for nurses and baby caregivers. Baby caregivers also misunderstand the infant's sleeping position, sleeping environment, and assisted sleep selection. Therefore, this research focuses on a safe sleeping

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environment for infants. Through systematic retrieval and extraction of high-level evidence-based resources at home and abroad, collecting evidence and making practical recommendations will help promote clinical nurses to carry out safe infant care and provide medical services. The personnel guides the infant caregiver's care behavior to provide an educational basis. The scope of application of this evidence summary is infants (including premature infants) in conventional medical institutions or at home but does not include premature infants who require special treatment in the intensive care unit (such as prone position ventilation).

## **2. Research methods**

### **2.1. Evidence Inclusion and exclusion criteria**

The specific problems of using the PIPPOST model to construct the evidence summary [6], and based on this, define the inclusion criteria of the evidence as follows: (1) The target population of evidence application in infants and their caregivers, especially premature infants, low birth weight infants, autonomic disorders, Babies with immature cardiopulmonary function regulation, mothers younger than 20 years old, smoking or alcohol exposure before or after birth. (2) Intervention methods include measures related to the sleep environment that promote sleep safety and reduce sudden infant death syndrome. (3) The professionals who apply evidence are clinical medical staff and infant caregivers. (4) The outcome index is the incidence or risk of sudden infant death syndrome. (5) The place where the evidence application is placed is the infant care institution or family. (6) The types of evidence include thematic evidence summary (including evidence summary, clinical decision-making, recommended practice, technical report), clinical practice guidelines, expert consensus, and systematic reviews. The exclusion criteria are because this evidence summary focuses on the infant's sleeping environment and appliances, so it does not include breastfeeding, immunization, smoking cessation, or other evidence for preventing SIDS.

### **2.2. Search strategy**

According to the evidence resource "6S" model [7], top-down retrieval is adopted. A computer search of BMJ Best Clinical Practice, UpToDate Clinical Consultant, JBI Library, Cochrane Library, Campbell Collaborative Network, American Guidelines Network, Ontario Registered Nurses Association Guide Network, Scottish Intercollegiate Guide Network, National Institute of Health and Clinical Optimization Evidence-based resource databases such as Guide Network and International Guide Network. It was supplemented with the search for comprehensive databases such as PubMed, EMBASE, Chinese biomedical literature databases, and the American Academy of Pediatrics and European Academy of Pediatrics websites. The types of evidence included are thematic evidence summary (including evidence summary, clinical decision-making, recommended practice, and technical report), clinical practice guidelines, expert consensus, and systematic reviews. When searching for clinical decision-making, recommended practice, evidence summary, clinical practice guidelines, and professional society websites, Chinese search terms include "infant," "sleep safety," and "sudden infant death syndrome." English search terms include "Infant," "sleep safety," and "sudden infant death syndrome." When searching for systematic reviews, the English search strategy is (infant or baby or newborn or neonates or preterm) and (sleep position or back-to-sleep or sleeping location or bed-sharing or co-sleeping or room-sharing or bedding or cribs or swaddling or wearable blanket or pacifier) and (sudden Infant death

syndrome or sudden unexpected Infant death or sudden death or sleep-related death or SIDS or SUID), the search time is from the establishment of the database to August 2019.

### **2.3. Evaluation of the quality of evidence**

According to the type of evidence, select the corresponding quality evaluation tool. Clinical decision-making, technical reports, and evidence summaries belong to the thematic evidence summary type in the "6s" evidence [8] and have a similar formulation process. Therefore, the quality evaluation tool of the evidence summary is used to evaluate the included clinical decision-making, technical report, and evidence summary [9]. There are ten items in total, and each item is assessed as "Yes," "Partial Yes," and "No." The clinical guideline research and evaluation system is used to determine the quality of the guidelines [10], including 23 items, ranging from scope and purpose, participants, the rigor of formulation, and clarity of presentation. Each item is evaluated on a scale of 1 to 7 in the six areas of applicability and independence of writing. Calculate each field, calculate the total score, and normalize to a percentage. The guidelines are divided into three levels, each with a score of more than 60% in 6 areas is recommended for level A, 30% to 60% is recommended for level B, and <30% is recommended for level C. The quality of systematic reviews was evaluated using the literature quality evaluation tool of the Australian JBI Evidence-based Health Care Center [11]. There are 11 items in total, and each item is evaluated as "yes," "no," "unclear," and "not applicable." Two researchers trained in the evidence-based methodology system independently completed the included literature. When the evaluation opinions conflicted, the third researcher in the team participated in the discussion and finally reached a consistent conclusion.

### **2.4. The summary, classification, and recommendation level of evidence**

Please read the included evidence piece by piece and extract and summarize it according to the theme. When the conclusions of evidence from different sources conflict, follow high-quality and newly published evidence first. The original grading system is adopted for the included clinical practice guidelines, recommended practices, and evidence summary, and the "2014 JBI Evidence Pre-grading and Evidence Recommendation Grade System" is adopted for the evaluation of the evidence system that lacks a grading system and included according to the best evidence generated Types of original documents, grading evidence from different sources [12]. After the evidence extraction and its source were completed, two researchers independently graded it. When opinions differ, the third researcher will participate in the discussion and finally reach a consensus conclusion. The recommendation level of evidence adopts the "2014 JBI Evidence Pre-grading and Evidence Recommendation Grade System", which refers to the grading system provided by the evidence itself. It is formed by a discussion between two clinical staff and two researchers in the evidence summary production team. All authors who participated in preparing and writing this evidence summary have received systematic evidence-based nursing education, have extensive experience in evidence grading, recommendation grading, and evidence quality evaluation, and all have clinical expertise in neonatal care.

### 3. Analysis of experimental results

#### 3.1. Evidence search results

A total of 2778 articles were retrieved. After importing the Endnote document management software to remove duplicates, 2216 articles remain. Two researchers independently read the titles and abstracts of the literature, excluding the literature that did not meet the inclusion criteria. They obtain the full text of the literature that may meet the inclusion criteria and determine whether it meets the requirements by reading the full text. When the two researchers disagree on the literature screening, the third researcher will participate in the discussion and decide whether to include it. During the screening process, three systematic reviews caused discussion. Two systematic reviews [13][14] were published in PubMed, the content of which is highly relevant to this topic. Still, after carefully reading the complete text, it is found that the purpose of the systematic review is to evaluate measures to promote the implementation of evidence for infant sleep safety, which is outside the study problem. Another systematic review [15] was published in the Cochrane Library. Still, it was excluded because no documents met the requirements in the field, no research results, and no evidence. Finally, 11 pieces of evidence were included. The sources, types, and subjects of evidence are shown in [Table 1].

Table 1. Evidence source, type, and content (n=11)

Included literature	Source	Year of publication	Type of evidence	Evidence subject
Moon etc.	American Academy of Pediatrics	2016	Technical Reports	Safe sleep environment
Moon	BMJ Best Clinical Practice	2017	Clinical decision	SIDS risk prevention
Corwin	UpToDate	2018	Clinical decision	SIDS risk prevention
Gilbert	PubMed	2005	system assessment	Sleeping position
Picheansathian etc.	JBI database	2009	system assessment	Sleeping position
Yennemann etc.	PubMed	2012	system assessment	Bed with parents
Das etc.	PubMed	2014	system assessment	Bed with parents
NICE	National Institute of Health and Clinical Optimization	2014	Clinical Practice Guidelines	Bed with parents
Blair etc.	PubMed	2008	system assessment	Head covering
Pease etc.	PubMed	2016	system assessment	Baby swaddling
Hauck etc.	PubMed	2005	system assessment	Pacifier

#### 3.2. Evidence profile and quality evaluation

This study included three thematic evidence collections, one of which was a technical report, and two were clinical decision-making [16][17]. The authors of the first two were the same. The preparation process for the three documents is rigorous, and the content is based on detailed and accurate. The quality evaluation results are shown in Table 2. A total of one clinical practice guideline was included in this study. The standardized percentages of AGREE II fields include 89.4% of scope and purpose, 68.7% of participants, 50.6% of the strictness of formulation, 48.7% of the presentation, and 73.2% of applicability. The independence of writing is 94.3%. The number of areas  $\geq 60.0\%$  is 4, the number of areas  $\geq 30.0\%$  is 6, and the recommended level is B. A total of 7 systematic reviews were included in

this study. Although some systematic reviews have been published for more than ten years, they are still included in this study because there are no more updated systematic reviews and original studies. The quality evaluation results are shown in [Table 3].

Table 2. Methodological quality evaluation results of the evidence summary included in this study (n=3)

Included literature	Moon etc.	Moon	Corwin
Scope and object-specific	Yes	Yes	Yes
The author is clear and transparent	Yes	Yes	Yes
Clear and transparent review	Yes	Yes	Partly
Transparent and comprehensive retrieval	Partly	Partly	Partly
Graded evidence	no	no	no
Clear recommendations	Partly	Partly	Yes
Recommendations are properly cited	Yes	Yes	Yes
Timeliness of recommendations	Yes	Yes	Yes
Statement of conflict of interest	Yes	Yes	Yes
Suitable for this study population	Yes	Yes	Yes

Table 3. Methodological quality evaluation results of systematic reviews included in this study (n=7)

Included literature	Gilbert	Picheansathian etc.	Yennemann etc.	Das etc.	Blair etc.	Pease etc.	Hauck etc.
Evidence-based questions are clear.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
The search strategy is appropriate	Yes	Yes	Yes	Yes	Yes	Yes	Yes
The search strategy is appropriate	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Appropriate source	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Document quality evaluation standards are appropriate	Not clear	Yes	Not clear	Yes	Not clear	Yes	Yes
Literature quality evaluation is done independently	Yes	Yes	Not sure	Yes	Not sure	Not sure	Yes
Measures to reduce data extraction errors	Yes	Yes	Not clear	Yes	Not clear	Not clear	Not clear
The method of merging research is appropriate	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Assess possible publication bias	Yes	Not clear	Yes	Not clear	Not clear	Not clear	Not clear
Recommend recommendations based on results	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Proposals for future research directions are appropriate	Yes	Yes	Yes	Yes	Yes	Yes	Yes

### 3.3. Evidence summary

After extracting 33 pieces of the available evidence and analyzing the evidence, four categories of evidence, including sleeping posture, sleeping position, sleeping environment, and auxiliary sleep tools, are finally formed, including nine evidence topics, as shown in Table 4. Although most of the evidence sources are earlier case-control studies or systematic reviews based on case-control studies (level 3 evidence), the results of these studies are the same. Also, considering infant safety and ethical issues, it is unrealistic to carry out a randomized controlled study with SIDS as the outcome. Therefore, referring to the recommendation levels in the summary of best clinical practice evidence from the American Pediatric Association, UpToDate, and BMJ, the first eight pieces of evidence are given A-level recommendations. Article 9 Evidence Although the use of pacifiers has obvious protective effects, a B-level recommendation is given due to the controversy over the impact on breastfeeding and dental occlusion.

Table 4. The content and level of the best evidence to prevent SIDS

Evidence description	source	Provenance	Grade
Sleeping position 1. Always keep the baby in a prone sleeping position (A grade recommendation)			
To reduce the risk of SIDS, babies, including premature babies, should sleep in the supine position at every stage of sleep until the age of one. The lateral position is unsafe and unstable and should not be recommended	American Academy of Pediatrics	Multiple case-control studies	3
Sleeping in the prone position only once increases the risk of SIDS; sleeping on the side is as dangerous as sleeping on the prone	BMJ Best Clinical Practice	4 case-control studies	3
All babies, including once-premature babies, should be placed in the supine position at any stage of sleep, even if they can flip from the supine position to the prone position by themselves	UpToDate	Multiple case-control studies	3
Compared with the supine position, the incidence of SIDS in the prone, side, and other lying positions is significantly higher	PubMed	A systematic review of 40 observational studies	3
In a hospital setting, premature babies may benefit from the prone position, but continuous cardiopulmonary and blood oxygen saturation monitoring is necessary to prevent SIDS.	JBI Library	A systematic review of 21 randomized controlled trials and 11 types of experimental studies	1
2. Babies should sleep in the same room as their parents but in different beds (A-level recommendation)			
Rooming with parents significantly reduces the risk of SIDS, while sharing a bed with parents significantly increases the risk of SIDS. It is recommended that the baby sleeps in the parent's room, close to the parent's bed, but on a separate bed in the first year of birth, at least six months after birth.	American Academy of Pediatrics	Multiple case-control studies and two systematic reviews	3
Sleeping with parents who smoke, drink, or use drugs and sleeping on a bed with pillows and blankets increases the risk of SIDS, especially for children over three months. Encourage parents and babies to sleep in the same room, but	BMJ Best Clinical Practice	Multiple case-control studies	3

they must be placed separately in a crib and shaker.			
In the basket.	UpToDate	Multiple case-control studies and one systematic review	3
The environment with the lowest risk should be sleeping in the parent's room but not in the same bed for at least six months. Use a crib, cradle, or other sleep tools specifically designed for babies	PubMed	A systematic review of 11 case-control studies	3
Bed-sharing with parents significantly increases the risk of SIDS, especially for babies younger than 12 weeks and babies whose mothers smoke. All families should be warned of the dangers of babies sleeping in the same bed with their parents	PubMed	A systematic review of 21 observational studies	3
Although bed-sharing increases the breastfeeding rate, it also significantly increases the incidence of SIDS. The benefits and risks of co-sleeping with mother and baby should be investigated carefully.	National Institute of Health and Clinical Optimization	12 case-control studies	3
3. Don't let the baby sleep on tools other than the crib (A grade recommended)			
All caregivers should be informed that sleeping with their parents is related to the occurrence of SDS, especially for babies whose parents smoke, drink, and use drugs and premature babies with low birth weight.	American Academy of Pediatrics	6 case-control studies	3
Putting a baby on a sofa or armchair to sleep will greatly increase the risk of SIDS	American Academy of Pediatrics	1 case-control study	3
Whether in hospitals or at home, it is not recommended to routinely put babies in car seats, strollers, rockers, baby slings, and baby slings to sleep, especially for young babies.	UpToDate	Multiple retrospective studies	4
4. Place the child on a firm surface to sleep (A grade recommendation)			
Except for travel, it is not recommended to place the key in a car seat or other seat (cart, strap, basket) for regular sleep	American Academy of Pediatrics	Expert opinion and 1 qualitative study	3
The baby should be placed on a firm sleeping surface (for example, a mattress in a safety-approved crib), covered with suitable bedsheets, and no other bedding or soft objects should be used to reduce the risk of SIDS and empty rest	BMJ Best Clinical Practice	professional opinion	5
Use hard mattresses and tightly fitting sheets to create a safe sleeping environment for babies.	UpToDate	professional opinion	5
5. Do not place any soft objects on the crib (A-level recommendation)			
Babies should always sleep in a certified baby cradle or crib with a firm surface	American Academy of Pediatrics	Multiple case series studies, case reports, and expert opinions	4
There should not be any soft or loose bedding on the bed, such as pillows, quilts, blankets, woolen products, inappropriate sheets, etc., or anything that may obstruct the baby's breathing or cause overheating.	BMJ Best Clinical Practice	2 case-control studies	3
The soft bed surface is an independent risk factor for SIDS, which increases the risk of SIDS by five times. Avoid using	UpToDate	3 case-control studies and	3

woolen products, pillows, and covers in babies' sleeping environments.		multiple cases	
6. Do not use the crib rail crash pad (A-level recommendation)			
Soft bedding and loose bedding increase the risk of SDS (5 times). Pillows, plush toys, sheepskins, and blankets should be placed outside of the crib and cradle	American Academy of Pediatrics	Series research	3
Cribs that meet safety standards have no head safety risk, so using bed rail crash pads is not recommended. The bed rail crash pad may be related to suffocation, trapping, and entanglement.	UpToDate	1 Top case series research and expert opinions	3
7. Avoid overheating in the sleeping environment and use of baby's hijab (A grade recommendation)			
The crib rail crash pad is also related to the death of children caused by suffocation, so it is not recommended to use the crib crash pad.	American Academy of Pediatrics	2 case Series studies	3
Avoid sleeping environment to avoid overheating and head covering. The number of baby clothes and blankets is related to the risk of SIDS. Using a baby hijab increases the risk of SIDS by seven times	BMJ Best Clinical Trial	4 case-control studies and one systematic review	3
The head should not be covered during sleep, as an overheated sleep environment may occur.	UpToDate	professional opinion	3
The risk of SIDS increases with the increase in baby clothes, covers, and room temperature. Using fans during sleep reduces the risk of SIDS	PubMed	2 ill-controlled studies	3
8. It is not recommended to use baby swaddling to aid sleep (A grade recommendation)			
Infants with SIDS have a quarter of their head covered, and head covering increases the risk of SIDS by eight times	American Academy of Pediatrics	A systematic review of 10 case-control studies	3
Although there have been studies suggesting that baby swaddling can reduce SIDS, it is still not recommended to use baby swaddling. Once the baby is wrapped and rolled to the prone position, the risk of SIDS will increase. If you use a baby swaddle, you will always keep the baby supine. Swaddling should not be used once the baby shows signs or ability to roll.	UpToDate	Multiple case-control studies, case series studies	3
Infant swaddling seems to increase the risk of SIDS, especially for babies who are older and do not sleep in a supine position	PubMed	1 systematic review	3
9. Consider using a pacifier (grade B recommendation)			
Although the evidence is weak, the meta-analysis results still show that infants increase the risk of SIDS, especially infants over six months.	American Academy of Pediatrics	A Systematic Review of 4 Case-control Studies	3
Pacifiers have obvious protective effects and can reduce the risk of SIDS by 50% to -90%. Consider giving the baby a pacifier during naps and formal sleep. Although several observational studies suggest that pacifiers can affect breastfeeding, systematic reviews have confirmed that pacifiers do not reduce breastfeeding rates.	BMJ Best Clinical Practice	10 case-control studies and two systematic reviews	3
Pacifiers have obvious protective effects. The awakening	UpToDate	1 systematic	3



threshold of children who fall asleep with a pacifier is lower. Using a pacifier during sleep can reduce the risk of SIDS (odds ratio 0.1~0.4). Consider encouraging regular use of pacifiers during sleep.		review and three case-control studies	
Although the mechanism is unknown, giving a pacifier during sleep may reduce the occurrence of SIDS	PubMed	1 systematic review	3

## 4. Discussion

### 4.1. This summary of evidence helps to improve the caring behavior of medical staff and baby caregivers

In all countries, SIDS is the primary factor threatening the safety of infants under one year old. Infant sleep environment is closely related to the occurrence of infant sleep-related death, and it is also the preventive behavior that is most easily interfered with. However, studies have found that clinical nurses still have inconsistencies with the evidence when choosing infant sleeping positions. Some studies emphasize the benefit of a prone position for premature babies or the effect of a side position on neonatal reflux asphyxia prevention, ignoring that an unstable posture will increase the risk of SIDS if continuous monitoring is not possible. The placement of the baby's sleeping position during hospitalization will subtly affect the caring behavior of the baby's caregivers. Parents and babies sleeping in the same bed, placing soft and loose objects in the crib, using the bed rail bumper, and having too many clothing covers are common behavioral misunderstandings among baby caregivers in my country. However, the American Academy of Pediatrics, BMJ Best Clinical Practice, and UpToDate clinical consultants have all released technical reports or clinical decision support information related to SIDS prevention. However, the content of this evidence is longer, and the language is difficult for nursing practitioners to understand. Evidence summary is to summarize and summarize the evidence related to healthcare interventions and activities around a specific theme or a group of topics [18]. Together with systematic reviews and practical guidelines, they constitute the main form of evidence synthesis [19]. Evidence summary can help practitioners understand the required evidence efficiently and is especially suitable for preparing evidence resources before evidence transformation [20]. This evidence summary entirely focuses on infant sleep-related evidence and covers key elements related to infant sleep, which will help nursing practitioners to obtain and understand the evidence efficiently. Establish standardized management procedures for sleeping safety and environment in and out of hospitals for infants to promote safe care of infants and prevent the occurrence of SIDS.

### 4.2. The process of forming this evidence summary is scientific and rigorous

This research follows evidence-based methodology, defines research questions through PIPST, and retrieves evidence layer by layer according to the "6S" model, trying to obtain scientific, reliable, and entirely focused high-level evidence. Strict evaluation of the quality of the literature is the guarantee for the reliability of the evidence summary. This study uses the literature quality evaluation tools of AGREE II and JBI Evidence-based Health Care Center to evaluate clinical practice guidelines and systematic reviews. The CASE tool will also be introduced to assess the quality of clinical decision-making literature, which will be more rigorous and efficient. In collecting evidence, the content, source, source, and grade of each piece of evidence are presented using the tabulation method, and the themes are merged and

extracted on this basis, which is more transparent. Although most of the evidence produced in this study is Level 3, considering the particularity of SIDS as an outcome indicator, case-control studies are the strongest evidence available and, therefore, can be used as the best basis for practice. In addition, the patient's participation in the formulation of evidence formulation can reflect the patient's wishes and is conducive to promoting the implementation and feedback of the best evidence. The makers of this evidence summary include evidence-based methodology experts, senior practitioners in pediatric care, and infant caregivers. The pros and cons of the evidence and clinical experience have been fully considered in forming recommendations. Feeling with caregivers and clinical applicability is better. The evidence produced in this study still has limitations. Some of the evidence is older and lacks new research results. In the application of pacifiers, clinical practice is still controversial. A systematic review published in 2005 concluded that pacifiers have a positive effect on preventing SIDS. Still, the 2017 Cochrane systematic review concluded that there is a lack of randomized controlled trials in this field, and no conclusion can be drawn [15]. And some new research evidence suggests that pacifiers harm breastfeeding [21][22]. How to balance the pros and cons of pacifiers to prevent SIDS and affect breastfeeding and which babies should be given priority to use pacifiers, there is still a lack of convincing evidence.

#### **4.3. Effective measures should be taken to promote the implementation of evidence for a safe sleeping environment for infants**

Although previous studies and this summary of evidence have given recommendations for infants' sleeping posture, sleeping position, sleeping environment, and sleep aids, the practice at home and abroad is not optimistic. Hirai et al. [23] surveyed more than 40,000 mothers in 29 states in the United States and found that 78% of caregivers sleep their babies in a prone position, but only 57.1% of families sleep in the same room as their parents but in different beds. Therefore, as suggested by the international consensus on the focus of SIDS research [24], in the field of nursing practice, future research should be based on updating the care knowledge of clinical medical staff, developing various interventions and various forms of educational materials, and evaluating them. Analyze the obstacles that may be encountered in implementing the best evidence, especially the role of social and cultural factors in influencing the sleep behavior choices of caregivers, find more precise action strategies, and promote the continuous conversion of evidence to clinical practice and the family.

### **5. Conclusion**

This study systematically retrieves high-level evidence-based resources at home and abroad, summarizes the best evidence of a safe sleeping environment for babies, and puts forward practical recommendations from four aspects of sleeping posture, sleeping position, sleeping environment, and auxiliary sleep tools, aiming to promote medical care Personnel and infant guardians follow the best evidence and regulate infant care practices. The next step will be to conduct applied research on the best evidence for infants' safe sleeping environment, promote the implementation and implementation of evidence, ensure the safety of infants' sleeping environment, and prevent SIDS.

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