

## Saskatchewan Prevention Institute

Interventions for the Prevention of Sudden Infant Death Syndrome (SIDS)  
 in the Community: A Summary of Evidence-Based Guidelines  
*An Evidence Summary to Inform Policy Makers, Healthcare Providers, and Service Providers*

### Research Question

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| What are the evidence-based guidelines regarding interventions for the prevention of SIDS in the community? |   |
| Population  | All infants (0-1)   |
| Intervention  | Interventions and harm reduction strategies for SIDS prevention (e.g., sleep environment modifications or requirements, etc.) |
| Comparison  | No comparator or control group  |
| Outcomes  | Reduction of SIDS   |

### Key Findings

- Co-sleeping increases the risk of SIDS and certain parental risk factors further increase that risk when co-sleeping.
- Parents and caregivers should be educated about ways to reduce the risk of SIDS which include:
  - avoidance of tobacco smoke, illicit drugs, and alcohol
  - promotion of breastfeeding, immunizations, and safe sleep including positions, surfaces, and attire
- Evidence appears to suggest an association between pacifier use and a reduced risk of SIDS; however, there is a lack of quality evidence to support a recommendation to parents that pacifiers should be used as a strategy to reduce the risk of SIDS.

### Intended Audience

This summary is intended for use by policy makers, healthcare providers, and service providers within Saskatchewan.

### Terminology

For purposes of this summary, the term ‘parents’ will also apply to caregivers who are not the infant’s biological parents.

### Background

SIDS is the third leading cause of infant death in Saskatchewan, preceded by conditions arising in the perinatal period as the leading cause and congenital anomalies as the second leading cause of infant death [1]. SIDS is defined as the death of an infant less than one year of age that is sudden and remains unexplained after a thorough case investigation, which includes an autopsy, examination of the death scene, and a review of the clinical history [2]. Although SIDS and asphyxia are both deaths that occur in a sleeping environment, they are distinct causes of death. Asphyxia is provided as a cause of death when the deceased infant is found with an airway obstructed by an object or a person’s body, access to fresh

air is restricted, or the infant is strangled by an object [3]. SIDS is provided as a cause of death when the deceased infant is found with no obvious obstruction of the airways [3]. The cause may actually be unexplainable or may have been asphyxia in the sleep environment with no way to confirm this (e.g., adult unintentionally obstructed infant's airway and later moved) [3]. Death by asphyxia and SIDS are not distinguishable by autopsy [3]. As many of the risk factors for SIDS and asphyxia closely resemble each other, avoiding unsafe sleep environments can help decrease the incidence of both types of infant death.

Although the incidence of SIDS dramatically decreased after the recommendation to place infants to sleep on their backs, this decline has plateaued in recent years [4]. Concurrently, other causes of infant death due to unsafe sleep environments (e.g., asphyxia) have increased in incidence [4]. Thus, a review of evidence-based guidelines was completed to ensure access to current evidence regarding interventions to prevent SIDS. The intention of this summary is to support efforts that seek to reduce the incidence of SIDS in Saskatchewan.

## Methods

At the request of the Saskatchewan Prevention Institute, the Canadian Agency for Drugs and Technologies in Health (CADTH) completed a Rapid Response Report summarizing guidelines focused on the prevention of SIDS. CADTH conducted a literature search in academic databases, including PubMed, the Cochrane Library, CINAHL, University of York Centre for Reviews and Dissemination databases, Canadian and major international health technology agencies, as well as a focused Internet search. Methodological filters were applied to limit retrieval to evidence-based guidelines, as these are considered a higher level of evidence than individual studies or systematic reviews<sup>1</sup>. Practice guidelines were included if they indicated that they were evidence-based; however, the guidelines were not formally assessed to determine the methodological rigor and transparency used in the development of the guidelines<sup>2</sup>. The search was limited to English-language documents published between January 1, 2011 and May 30, 2016. Seven evidence-based guidelines [3-9] were identified regarding interventions for the prevention of SIDS in the community. These guidelines form the basis of the current evidence summary.

## Summary of Research Findings

Although the cause of SIDS is unknown, research has identified several associated risk factors as well as interventions that contribute to the prevention of SIDS.

### *Co-sleeping*

Evidence suggests an association between co-sleeping and an increased risk of SIDS [3, 4, 6-8]. For parents who choose to co-sleep with their infant, this association is greater when the following risk

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<sup>1</sup> See the *Levels of Evidence: The Pyramid Model*

<sup>2</sup> It has been proposed that to be fully confident that the resulting recommendations of a guideline are evidence-based, the methods need to be assessed. The Appraisal of Guidelines for Research & Evaluation (<http://www.agreetrust.org/about-the-agree-enterprise/introduction-to-agree-ii/>) instrument was developed to address the issue of variability in the quality of practice guidelines.

factors are present: infant is younger than 3 months of age [3, 4], either parent is a smoker or the mother smoked during pregnancy [3, 4, 7, 8], parent is excessively tired or is using medications or substances that impair alertness and ability to arouse [3, 4, 7, 8], bed-sharing with multiple persons, soft sleep surface, sleep surface includes soft bedding [3, 4], the infant was born prematurely or with low birth weight [3, 8]. Parents should be educated regarding the benefits of sharing a room, but not a sleep surface, with their infant [3, 4, 6, 9]. The safest place for an infant to sleep is on a separate sleep surface close to the parent's bed for at least the first six months of life [3, 4]. Because of the high risk of SIDS on couches and chairs, parents should remain alert and careful to ensure they do not fall asleep when feeding infants while seated in a couch or chair [4, 8, 9]. It is recommended that parents be provided with information regarding the association between co-sleeping and SIDS [3, 4, 8] with one guideline recommending this be done at each postnatal appointment [8]. If parents choose to co-sleep, they should be advised of the risk factors that further increase the risk of SIDS when co-sleeping [3, 8] and the family should be educated about methods to enhance the safety of this practice [7, 9].

#### *Sleep Position*

Placing infants to sleep on their front or side is a risk factor for SIDS [6, 8]. Infants should be placed on their backs to sleep, for every sleep [3, 4, 6, 7, 9]. Once infants can roll from back to front and from front to back, they can be allowed to remain in the sleep position that they assume [4]. Parents should be educated regarding safe sleep positions [3, 4, 6, 7, 9].

#### *Sleep Surface*

A firm sleep surface with no soft objects in the crib reduces the risk of SIDS [3, 4, 6, 9]. Sitting devices such as car seats, strollers, swings, and infant carriers should not be used for routine sleep [3, 4, 9]. Parents should be educated regarding safe sleep surfaces [3, 4, 6, 9].

#### *Sleep Attire and Bedding*

Infants whose heads are covered are at an increased risk of SIDS [3, 4, 6]. Infant clothing that does not pose a hazard of covering the head should be used [4, 9]. Infants who get too warm are also at an increased risk of SIDS [3]. Infants may be too warm if they are damp and sweating, if their cheeks are flushed, or if they develop a heat rash [4]. Parents and caregivers should evaluate the infant for signs of overheating and be educated regarding safe sleep attire and coverings [3, 4, 9].

#### *Smoking*

Infants who are exposed to tobacco smoke before and after they are born are at an increased risk of SIDS [3, 4, 6, 9]. The association between co-sleeping and SIDS is greater when either parent smokes [3, 4, 7, 8]. Health education should be provided to parents before and after birth to highlight the increased risk of SIDS when the infant is exposed to smoking during or after pregnancy [3, 4, 6, 9]. Parents who smoke should be taught strategies to reduce infant exposure to cigarette smoke and referred to smoking cessation counseling [3, 9].

### *Alcohol Use*

Infants who are born to mothers who drink alcohol during pregnancy or are cared for by someone who drinks alcohol are at an increased risk of SIDS [3, 4, 9]. The association between co-sleeping and SIDS is greater when either parent recently has drunk alcohol [3, 4, 7, 8]. Health education should be provided to parents before and after birth to highlight the increased risk of SIDS when using alcohol during pregnancy and while caring for an infant [3, 4, 7, 8].

### *Illicit Drug Use*

Infants who are born to mothers who use illicit drugs during pregnancy, or are cared for by someone who uses illicit drugs, are at an increased risk of SIDS [3, 4, 9]. The association between co-sleeping and SIDS is greater with parental drug use [3, 4, 7, 8]. Health education should be provided to parents before and after birth to highlight the increased risk of SIDS when using illicit drugs during pregnancy and while caring for an infant [3, 4, 7, 8].

### *Breastfeeding*

Breastfeeding reduces the risk of SIDS [4, 6, 7]. If possible, mothers should exclusively breastfeed for six months, but any breastfeeding is more protective against SIDS than no breastfeeding [4]. Health education should be provided to parents before and after birth to promote breastfeeding as a protective factor against SIDS [3, 4, 7].

### *Immunizations*

Immunizations may have a protective effect against SIDS [3, 4]. Health education should be provided to parents before and after birth regarding routine immunizations as a protective factor against SIDS [3, 4].

### *Pacifiers*

Evidence appears to suggest an association between pacifier use and a reduced risk of SIDS [4-7]; however, the existing evidence is insufficient to support a recommendation to parents that pacifiers should be used as a strategy to reduce the risk of SIDS [5, 9]. Some guidelines indicate that pacifiers may be used after the first four weeks when breastfeeding has been established, as it could possibly reduce the risk of SIDS [4, 7, 9]. Parents should be supported when making informed decisions about pacifier use [4, 5, 7]. If an infant has become accustomed to using a pacifier while sleeping, the use should not be suddenly stopped within the first 26 weeks of life as it can increase the risk of SIDS [8].

### *Other Risk Factors*

Additional risk factors exhibited by pregnant women, parents, and infants that are associated with an increased risk of SIDS include:

Infant: twins, infant age [3], male sex of the infant, preterm birth, low birth weight, illness, or congenital conditions [3, 9].

Parental: obstetrical factors, beliefs that are incongruent with safe sleep recommendations (e.g., cultural differences in infant sleep practices)[3], lack or late initiation of prenatal care, mental illness, low socio-economic status [3, 9].

### *Parent and Healthcare Provider Education*

Research has found some healthcare clinicians and populations of patients to have received inadequate information about proper sleep position [6]. It is essential that parents, pregnant women, healthcare providers, policy makers, researchers, and other professionals be aware of the ways to reduce SIDS [4]. Healthcare providers should model and encourage safe sleep practices while infants are in the hospital [3, 9], as counseling about and demonstration of appropriate sleep position by healthcare providers has been found to increase the percentage of parents who place their children on their backs to sleep [6]. Healthcare providers should assess women, their partners, and other caregivers for factors associated with a higher risk of infant injury or unexpected death while sleeping [3]. Infants, their sleep positions, and environments should also be assessed for factors associated with a higher risk of SIDS [3, 6] with one guideline recommending these assessments be done at each appointment or contact [3]. One guideline recommended that the national campaign to reduce the risk of SIDS be expanded to include a major focus on the safe sleep environment and ways to reduce the risks of all sleep-related infant deaths with pediatricians, family physicians, and other primary care providers actively participating in this campaign [4].

**For a more detailed summary of each of the guidelines and their recommendations, visit the [Summary Table for the SIDS Evidence Based Guidelines](#)**

### **References**

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