

Bed-sharing is a risk for sudden unexpected death in infancy

David Tappin ¹, Edwin A Mitchell, ² James Carpenter, ³ Fern Hauck, ⁴ Lynsay Allan ⁵

Bed-sharing refers to a baby and adult (usually mother) sleeping together on the same sleep surface (usually a bed) for some or all sleeps.

SCOTTISH GOVERNMENT ADVICE ON INFANT SAFE SLEEP

Previous Scottish Government Reduce the Risk of Cot death advice, endorsed by the Scottish Cot Death Trust and Unicef, included: “The safest place for your baby to sleep at night, during the first six months, is on their back in a cot in your room.” **Figure 1A** illustrates the cot where the baby should sleep after a feed or cuddle.

The Scottish Government is now issuing the Lullaby Trust’s Safer Sleep-Saving Babies Lives leaflets for professionals (<https://www.lullabytrust.org.uk/wp-content/uploads/Safer-sleep-saving-lives-a-guide-for-professionals-web.pdf>) and parents (<https://www.lullabytrust.org.uk/wp-content/uploads/Safer-sleep-for-babies-a-guide-for-parents-web.pdf>) endorsed by Public Health England, which use clipart similar to **figure 1B** with no infant cot to indicate the safest place for your baby to sleep after a feed or cuddle. The Scottish Government now recommends avoidance of bed-sharing only if *additional hazards* are present such as parental smoking, alcohol or drug use or sleeping on a sofa.

We believe this written literature—without spelling out inherent risk of bed-sharing for sleep and only recommending against bed-sharing if *additional hazards* are present—in conjunction with **figure 1B** with *no* infant cot to indicate the safest place for your baby to sleep, will encourage more parents to share their adult bed with their young baby and lead to many otherwise avoidable infant deaths.

WHAT IS KNOWN

Bed-sharing is associated with sudden unexpected death in infancy (SUDI). SUDI includes SIDS (also known as cot death) (International Classification of Diseases ICD-10 code R95), ill-defined and unknown cause of mortality (R99) and accidental suffocation or strangulation in bed (W75). It is well established that SUDI risk with bed-sharing is elevated with *additional hazards* including parents smoking, drinking two or more alcohol units, taking medicine causing drowsiness or using recreational drugs. Low birth weight or pre-term babies are at higher risk as are young infants if they bed-share for sleep with parent(s).

WHAT IS CONTROVERSIAL

In the absence of *additional hazards*, is there inherent risk of SUDI with bed-sharing for young infants less than 3 months? In 2004–2005, the European Concerted Action on SIDS (ECAS)¹ comprising case-control studies in 20 European regions and a Scottish study² showed significant risk for babies under 8 and 11 weeks respectively bed-sharing with non-smoker(s). In Edmonton Canada, the International SIDS Community asked for a meta-analysis of all relevant data. An individual participant data meta-analysis of case-control studies (ECAS, Scotland, Ireland, Germany and New Zealand with 1472 cases and 4679 controls) confirmed significant risk for young babies under 12 weeks bed-sharing in the absence of *additional hazards*.³ An extreme sensitivity analysis confirmed significant risk for babies under 8 weeks bed-sharing with

non-smoking adult(s) who did not drink or take drugs.⁴ The International SIDS Community has set policy based on this meta-analysis and a priority for safety: USA—It is recommended that infants sleep in the parents’ room, close to the parents’ bed, but on a separate surface designed for infants, ideally for the first year of life, but at least for the first 6 months; New Zealand—Place baby in his or her own baby bed in the same room as parent or caregiver; Australia—Sleep baby in their own safe sleeping place in the same room as adult care-giver for the first six to twelve months; Europe—Co-sleeping should be avoided; Canada—Place your baby to sleep in a crib, cradle or bassinet next to your bed; Ireland—Do not fall asleep in bed with your baby if baby is less than 3 months of age.

Recently (21 April 2021), England’s National Institute for Health and Care Excellence (NICE) NG194 Postnatal Care⁵ Benefits and Harms of Bed-sharing ‘agreed that on the basis of the evidence presented, which showed no greater risk of harm when parents shared a bed with their baby compared to not bed sharing, health-care professionals should not routinely advise parents against sharing a bed with their baby’. This conclusion is wrong.

The (NICE) committee used the data from their evidence review N on co-sleeping risk factors in relation to SUDI and their own expert knowledge, to recommend advice on safer practices for bed-sharing that practitioners should provide to parents and circumstances when bed-sharing might not be safe...’ Review N included: an English study⁶ (pooled data) reporting a 60% increase in risk of SUDI for babies <14 weeks bed-sharing without *additional hazards* and a Scottish study² reporting a highly significant tenfold increased risk for bedsharing with infants <11 weeks if parents were non-smokers or breast feeders. Despite including these studies, these important findings were not discussed by review N. Excluded studies: ECAS¹ uncovered a 240%

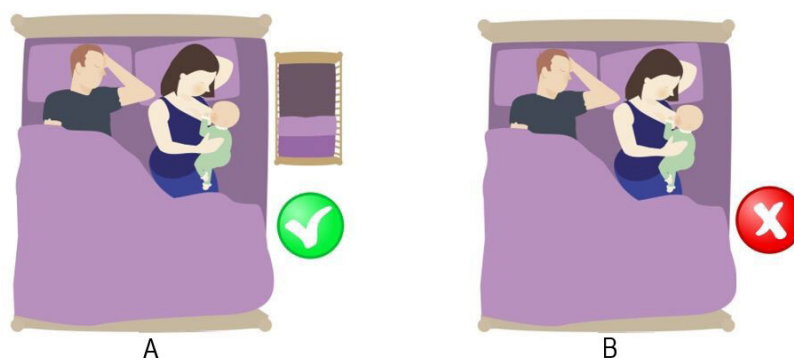


Figure 1 Feeding your baby in bed (A) with a cot next to bed (B) with no cot next to bed.

¹Child Health, University of Glasgow, Glasgow, UK

²Paediatrics, The University of Auckland, Auckland, New Zealand

³Department of Medical Statistics, London School of Hygiene & Tropical Medicine, London, UK

⁴Family Medicine and Public Health Sciences, University of Virginia, Charlottesville, Virginia, USA

⁵Scottish Cot Death Trust, Glasgow, UK

Correspondence to Professor David Tappin, Child Health, University of Glasgow, Glasgow G12 8QQ, UK; david.tappin@glasgow.ac.uk

increase in risk for bed-sharing infants age 2 weeks with non-smoking parents and the International SIDS Community–endorsed meta-analysis³ showed a 510% increase in SUDI deaths when bed-sharing with babies under 3 months without *additional hazards*. The stated reason review N excluded these pivotal studies was *pooled data* but why carefully performed evidence synthesis by meta-analysis should be excluded is unclear. Therefore, strong evidence of increased risk of bedsharing with *young* infants was either ‘excluded’ or not discussed by review N and was therefore missed by the NICE committee.

BREAST FEEDING AND BED-SHARING

We recognise that research indicates that bed-sharing is associated with longer duration of breast feeding and other breastfeeding outcomes. The NICE guideline⁴ suggests this positive effect. However, a recent 2021 Cochrane Review—*Bed sharing vs no bed sharing for healthy term neonates*—found no randomised controlled trials that were of sufficient quality to be examined.

We recognise that many parents choose to take baby into bed to feed (breast or bottle) or to comfort. Many deaths occur when adult caregivers unintentionally fall asleep. A smartphone alarm/timer may reduce these events. The American Academy of Pediatrics 2016 guidelines recommends returning infant back into their safe sleep space once parent wakes.

NOT LEARNING FROM A PAST EPIDEMIC

Inadvertent promotion of parental behaviour change to infants sleeping prone⁷ caused thousands of sudden infant deaths worldwide in the 1960–1980s. It is estimated that 10 000 unnecessary infant deaths occurred

between 1965 (5% prone) and 1990 (55% prone) in the UK because of this change.⁷ Many deaths would have been avoided if systematic review and meta-analysis had been undertaken in the early 1970s when sufficient evidence had already accumulated.⁷ Meta-analysis *has* been undertaken for bed-sharing³ and showed an inherent risk of SUDI for babies under 3 months without *additional hazards*. As paediatricians we know this makes sense as head control to safeguard the airway develops over the first 3–4 months.

We urge the UK governments’ policy to follow the lead of health agencies around the world focusing on *safety* in order to avoid increasing the risk of death for many babies and not succumbing to pressure to change this advice: “The safest place for your baby to sleep at night, during the first six months, is on their back in a cot in your room.”

Contributors LA, DT, EAM and JC sought to put forward this Viewpoint. FH agreed to provide the North American guidance regarding bed-sharing. All authors provided their expertise, experience and both their research and review of all research findings to create a Viewpoint representative of the world consensus of the inherent risk of bedsharing for sudden unexpected death in infancy.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not applicable.

Provenance and peer review Commissioned; externally peer reviewed.



OPEN ACCESS

Open access This is an open access article distributed in accordance with the Creative Commons Attribution

Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

© Author(s) (or their employer(s)) 2023. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.



To cite Tappin D, Mitchell EA, Carpenter J, *et al*. *Arch Dis Child* 2023;**108**:79–80.

Received 31 May 2021

Accepted 8 October 2021

Published Online First 21 October 2021

Arch Dis Child 2023;**108**:79–80.

doi:10.1136/archdischild-2021-322480

ORCID iD

David Tappin <http://orcid.org/0000-0001-8914-055X>

REFERENCES

- 1 Carpenter RG, Irgens LM, Blair PS, *et al*. Sudden unexplained infant death in 20 regions in Europe: case control study. *Lancet* 2004;363:185–91.
- 2 Tappin D, Ecob R, Brooke H. Bedsharing, roomsharing, and sudden infant death syndrome in Scotland: a case-control study. *J Pediatr* 2005;147:32–7.
- 3 Carpenter R, McGarvey C, Mitchell EA, *et al*. Bed sharing when parents do not smoke: is there a risk of SIDS? An individual level analysis of five major case-control studies. *BMJ Open* 2013;3:e002299.
- 4 Carpenter JR, Smuk M. Missing data: a statistical framework for practice. *Biom J* 2021;63:1–33.
- 5 Postnatal care. Available: <https://www.nice.org.uk/guidance/ng194/>
- 6 Blair PS, Sidebotham P, Pease A, *et al*. Bed-sharing in the absence of hazardous circumstances: is there a risk of sudden infant death syndrome? An analysis from two case-control studies conducted in the UK. *PLoS One* 2014;9:e107799.
- 7 Gilbert R, Salanti G, Harden M, *et al*. Infant sleeping position and the sudden infant death syndrome: systematic review of observational studies and historical review of recommendations from 1940 to 2002. *Int J Epidemiol* 2005;34:874–87.