FAQs - Using the SNOO Smart Sleeper in Clinical Care Settings

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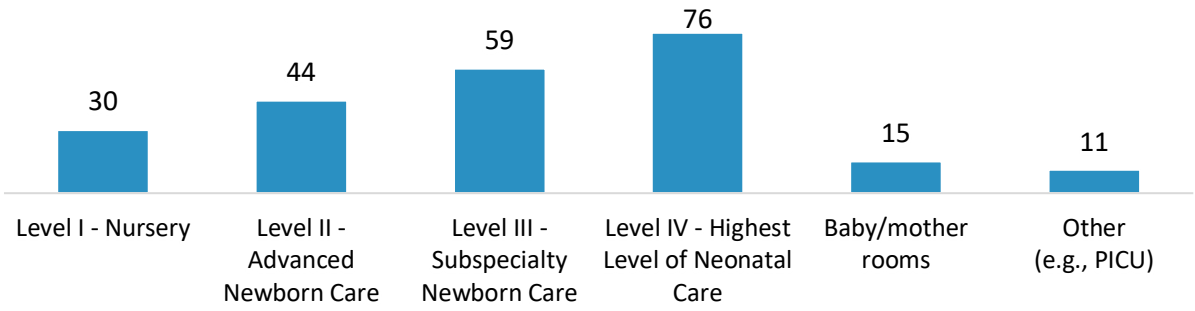
More questions?

Please give our Customer Care team a call at **855.424.6323** or email us at health@happiestbaby.com. We are here to help!

1. In what clinical care settings can SNOO be used?

Hospital administrators and clinical care teams use SNOO in the ***Mother-Baby Unit***, ***Nursery***, and ***NICU***. In a survey of 44 hospitals (200+ respondents), nurses and other clinicians reported using SNOO in the following care settings:



In addition, SNOOs are being used in outpatient and residential settings, including:

- ***Intermediate care*** and ***NICU step-down units***
- ***Residential facilities*** for at-risk families (e.g., caregivers with history of homelessness)
- ***At-home*** in studies evaluating SNOO's impact on infant sleep and caregiver wellness (e.g., postpartum depression, anxiety, parental self-efficacy, sleep behaviors).

2. Are there inclusion/exclusion criteria for hospitals use?

SNOO's motion and sound are safe for infants weighing at least 4 pounds that can maintain thermoregulation (typically by 33-34 weeks gestational age). Infants usually grow out of SNOO by around 6 months of age, by the time they reach 25 lbs., or when they demonstrate the ability to roll over independently onto hands and knees.

We **do not** recommend SNOO for infants with neurological or spinal defects, bleeding diathesis (hemophilia, anticoagulant therapy, intracranial bleeding, etc.), hydrocephalus, post-neurological surgery, or any other condition that might contraindicate the use of swaddling or a rocking bed.

For questions about SNOO's recommended exclusion criteria, please contact the Hospital Program here.

3. Can SNOO be used with babies undergoing hyperbilirubinemia treatment?

Special SNOO sacks are available that are made entirely of mesh. The all-mesh design allows babies to keep comfortable and benefit from SNOO's motion and white noise, while also enabling light therapy to reach babies' skin. Want to trial a sample at your organization? Send us an email!

4. How should the SNOO and its soft goods accessories be cleaned?

SNOOs have been approved by Biomed Departments in over 100 hospitals across the U.S. All the soft goods accessories (i.e., sleep sacks, fitted mattress sheets, infection control covers) can be washed in accordance with the CDC's recommended hospital laundering practices of dilution and agitation in water of at least 160°F (71°C) for a minimum of 25 minutes.[1]

Each SNOO comes with two distinct types of infection control covers that envelop the mattress and the inner and outer mesh:

- ***Reusable covers:*** These are made from a waterproof fabric. They are cleaned between patients or when soiled. There are two recommended methods for cleaning the reusable covers:
    - Option 1: Use CaviWipes or hydrogen peroxide-based disinfectant to wet all exposed surfaces on the bassinet and the mesh and mattress covers. The surface should remain visibly wet for 1 min. at room temperature.
    - Option 2: The covers can be machine washed on a setting between 160°F-165°F using liquid detergent or with zero-residue oxygenated bleach containing no chlorine. They are to be dried on medium heat at a temperature not exceeding 130°F.
- ***Disposable covers:*** These are made from the medical-grade, wipeable fabric (100% latex-free polypropylene). The disposable covers are for single patient use and may be used for the duration of a baby's length of stay if the material is not compromised (e.g., torn, soiled).

5. How loud does the SNOO get? Are the sound levels safe for newborns?

White noise is recognized as a calming and sleep enhancing sensation. In the womb, babies are exposed to multiple noises from maternal physiologic sounds, including the voice of the mother and the constant, rhythmic murmur from blood flow through uterine, umbilical, and placental vessels. Intrauterine sound levels have been measured at 72-95 dB.[2,3]

Infant care providers have long recognized the benefit of sound. They routinely shush loudly (~95 dB) to calm fussing and shush softly (~70 dB) to lull babies into sleep. Studies of baseline sound in NICUs have demonstrated average levels of 60-89 dB in the room and levels that were

[1] Centers for Disease Control & Prevention, (2003) "Guidelines for Environmental Infection Control in Health-Care Facilities", available at: https://www.cdc.gov/infectioncontrol/guidelines/environmental/background/laundry.html

[2] Smith CV, Satt B, Phelan JP, et al. (1990) "Intrauterine sound levels: Intrapartum assessment with an intrauterine microphone." *Am J of Perinat*; 7: 312-315, doi: 10.1055/s-2007-999511.

[3] Walker D., Grimwade J., & Wood C. (1971), "Intrauterine noise: A component of the fetal environment. *Am J of Obgyn*, 09(1):91-5. doi: 10.1016/0002-9378(71)90840-4.

8 dB higher in the isolette.[4] These sound levels were found to have no negative physiologic responses in the infant experiencing intermittent acoustic events in the NICU.[5] In fact, the white noise used by SNOO has even been shown to reduce hypoxemic and bradycardic events and stabilize breathing and cardiac control in preterm infants.[6]

SNOO's white noise is specifically engineered to soothe infants by mimicking in-utero sounds. The sound on the blue baseline level is around 68dB measured at the baby's ear, and its highest volume at the orange level is approximately 85 dB, which is significantly less intense than a baby's own cries.

Clinicians who prefer to reduce the noise can do so in the "Settings" tab of the SNOO app by choosing the lowest sound intensity. The normal level can be reduced to around 55dB.

6. Does the SNOO Sleep Sack restrain an infant's arms?

Babies have an immature nervous system, and it is not uncommon for sleeping babies to experience an involuntary motor response known as the Moro reflex. This reflex can cause supine sleeping babies to startle and wake themselves up in the middle of the night. The SNOO's special Sleep Sack keeps babies' arms snug and secure for better sleep efficiency.

Additionally, SNOO Sleep Sack's wing loops are an essential safety feature. SNOO *will not turn on* until the caregiver fully slides the wing loops onto the bed's safety clips. This is also a design element to keep infants safely on the back – the AAP's recommended sleep position – during all sleep episodes.

7. Is the movement of the bassinet appropriate for a newborn?

Like white noise, rhythmic motion is well-established as a calming technique for both infants and adults. Slow rocking is effective at lulling us into sleep, as many have experienced when swaying in a hammock, sleeping on a boat, or relaxing in a rocking chair. Researchers have likewise found a positive association between motion and its soothing effect among infants – as motion increases, fussiness decreases and more time is spent in quiet sleep.[7] The sensory stimulation that accompanies motion prompts a synchronizing action in the brain, which supports internal sleep rhythms.[8]

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[4] Smith S. W., Ortmann A. J., & Clark W. W., (2018) "Noise in the neonatal intensive care unit: a new approach to examining acoustic events" *Noise Health*, Aug 2018;20(95):121-130. doi: 10.4103/nah.NAH_53_17.

[5] Ibid.

[6] Parga J. J., Bhatt R. R., Kesavan K., et. al., (2017) "A prospective observational cohort study of exposure to womb-like sounds to stabilize breathing and cardiovascular patterns in preterm neonates", *Journal of Maternal-Fetal & Neonatal Medicine,* 31(17): 2245-2251, doi: 10.1080/14767058.2017.1339269

[7] Pederson, D.R. & Vrugt, D.T. (1973) "The influence of amplitude and frequency of vestibular stimulation on the activity of two-month-old infants", *Child Dev*,44(1):122-128.

[8] Bayer L, Constantinescu I, Perrig S, et al. (2011) "Rocking synchronizes brain waves during a short nap", *Curr Biol,* 21(12):R461-R462. doi:10.1016/j.cub.2011.05.012

Additional studies have described the beneficial effects of motion when compared to stillness. Among a group of babies being held by their mothers, those carried by a walking mother (versus sitting) were calmer and exhibited less crying.[9] Apnea, or temporary cessations of breathing, was significantly reduced among preterm infants placed in oscillating water beds versus regular beds.[10] The same type of bed was also associated with increased quiet sleep and a significant reduction of crying and fussiness.[11]

At its baseline level, SNOO is designed to slowly rock babies at a one-inch amplitude throughout sleep, and in faster, shorter motions when the baby is crying. The SNOO's motor is physically limited in how far it can move. At the highest level, the amplitude is capped at approximately ¼ inch to either side, creating a jiggle that is similar to a mother holding her baby and bouncing on a yoga ball or driving an infant in a car seat down a bumpy road.

The two fastest motions are often necessary for soothing very irritable babies (e.g., those withdrawing from drugs). However, the factory default for SNOO is a setting called *Motion Limiter* where the two highest levels of motion are blocked, unless the hospital staff chooses to turn the setting off and enable all levels of bed movement (instructions available here).

SNOO has passed all requirements for certification by the ASTM, the Juvenile Products Manufacturers Association, and the Consumer Products Safety Commission. However, we **do not** recommend SNOO for infants with neurological or spinal defects, bleeding diathesis (e.g., hemophilia, anticoagulant therapy, intracranial bleeding), hydrocephalus, post-neurological surgery, or any other condition that might contraindicate the use of a rocking bed.

8. Might SNOO interfere with breastfeeding cues?

SNOO comforts fussing when a baby is tired and may soothe babies with very early feeding cues, similar to a caregiver rocking a baby in a rocking chair. However, SNOO does not settle crying from discomfort or mid-to-late hunger cues. The bassinet is designed to automatically stop—or "time out"— if crying continues more than 3 minutes. If crying lasts beyond this period, it can be assumed that the baby needs assistance from a caregiver (e.g., a feeding, diaper change).

[9] Esposito G, Yoshida S, Ohnishi R, et al. (2013) "Infant calming responses during maternal carrying in humans and mice", *Curr Biol,* 23(9):739-745. doi:10.1016/j.cub.2013.03.041

[10] Korner AF, Guilleminault C, Van den Hoed J, Baldwin RB. (1978) "Reduction of sleep apnea and bradycardia in preterm infants on oscillating water beds: a controlled polygraphic study", *Pediatrics*, 61(4):528-533.

[11] Edelman AH, Kraemer HC, Korner AF. (1982) "Effects of compensatory movement stimulation on the sleep-wake behaviors of preterm infants" *J Am Acad Child Psychiatry*,21(6):555-559. doi:10.1097/00004583-198211000-00006

Research has shown that poor maternal sleep quality is a significant predictor for lower breast milk production.[12] Similarly, fatigue and sleep difficulties can lead to problems with mood and depression in new mothers, which may negatively impact maternal health and continuation of breastfeeding.[13,14,15] SNOO is currently being studied as a tool to *increase* breastfeeding initiation in the immediate postpartum period by enhancing infant and maternal sleep. Lastly, in a 2020 survey of over 1,200 SNOO users, 96% of respondents reported having ever breastfed, compared to a national average of 64% at 8 weeks postpartum.[16,17]

9. Does arms-down swaddling interfere with a baby's ability to self-soothe?

In the first few months of life, babies typically lack the motor control skills required to effectively self-soothe through finger sucking. It is fine for babies to have hands unswaddled while they're awake, but swaddling the arms down at the sides has been found to improve sleep efficacy. With arms unwrapped, they are more likely to startle themselves awake or to get frustrated by being unable to successfully coordinate bringing the hand to the mouth.

As the baby develops over the first few months, the startle reflex wanes and they begin to master self-soothing capabilities. At this point, caregivers are encouraged to unsnap the arm holes in the SNOO Sleep Sack to allow the baby's arms to be unswaddled.

10. What resources are available to train clinical care team members on SNOO?

All SNOOs are accompanied by a user guide. In addition, our team will provide training videos and attachments when your SNOOs are en route to your organization. Below is a list of materials to orient your team:

- **SNOO Hospital Program Quick Start Guide**: A poster that can be printed, laminated, and placed next to your SNOOs as a reference
- **Infection Control Covers Instructions:** Product sheet outlining the disposable and reusable SNOO covers specifications and assembly steps
- **SNOO Sleep Sack Instructions**: Product sheet outlining the SNOO Sleep Sack specifications and instructions for use

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[12] Carrega, J., et. al. (2019), "Postpartum Sleep and Breastfeeding Outcomes Among First-Time Mothers of Full-Term Newborns," JOGNN, 48;3:S138, doi: 10.1016/j.jogn.2019.04.230

[13] Bei, B., Coo, S., & Trinder, J. (2015), "Sleep and Mood During Pregnancy and the Postpartum Period," *Sleep Medicine Clinics*, 10;1:25-33, doi: https://doi.org/10.1016/j.jsmc.2014.11.011

[14] Park, E.M., Meltzer-Brody, S., & Stickgold, R. (2013), "Poor sleep maintenance and subjective sleep quality are associated with postpartum maternal depression symptom severity," *Archives of Women's Mental Health*, 16:539-347, doi: 10.1007/s00737-013-0356-9

[15] Okun, M., et al. (2018) "Poor sleep quality increases symptoms of depression and anxiety in postpartum women", *J Behav Med*, 41:703-710, doi: 0.1007%2Fs10865-018-9950-7

[16] [Internal] Happiest Baby 2020 Fall Safe Sleep Survey; available upon request.

[17] Bombard, J.M., et. al. (2018) "Vital Signs: Trends and Disparities in Infant Safe Sleep Practices — United States, 2009–2015" *MMWR*, 67(1);39-46, available at: https://www.cdc.gov/mmwr/volumes/67/wr/mm6701e1.htm

Request copies by emailing us or calling 855-424-6323. And, please don't hesitate to let us know if your team would be interested in other assets, like video tutorials and testimonials.

11. What optional SNOO features or accessories are available for hospitals?

SNOO includes several accessories that are very helpful in the hospital setting.

Mobile App: Offers helpful add-on features for teams using SNOO (e.g., Level Lock, Weaning Mode, Sleep Logs). Please note: SNOO does **not** require the use of the app to be functional. For more information, see our *FAQS for Mobile App Use*.

Specialty Soft Goods:

- **XS SNOO Sack**: For preterm babies who don't fit the size small
- **All-Mesh SNOO Sleep Sack**: Provides extra ventilation and breathability; may also be used for babies undergoing light treatment for hyperbilirubinemia
- **No-Mesh SNOO Sleep Sack** & **Sleepea**: For extra durability during high-heat laundering

Infection Control Covers: For ensuring SNOO meets hospital Biomed standards and protocols

Mobility Cart: For transporting the SNOO bassinet, providing ample storage, and elevating the head of the bassinet platform for babies with reflux

Leg Lifters: If you do not have a SNOO mobility cart, SNOO leg lifters are an option for mildly elevating the head of the bassinet for babies with reflux.

12. How do we determine if the SNOO Sleep Sack is the right size?

The SNOO Sleep Sack is designed to be loose enough in the hips to allow the infant's legs to bend and open at the knee and the hips to flex and abduct ("frogging out"). Both the SNOO Sleep Sack and Sleepea are listed as hip safe by the International Hip Dysplasia Institute.

Newborns wear either the small or extra-small sized sacks. Happiest Baby's customer care specialists are available seven days a week to help with any questions on size selection (or on any other topic!).

13. Will the baby need to be weaned from the bed before going home?

No, babies do not need to be weaned from SNOO prior to discharge. SNOO mimics the actions of an experienced caregiver, so the white noise and gentle rhythm of SNOO may be carried out manually in the home setting. In fact, many families – both SNOO users and non-SNOO users – choose to use swaddling, white noise, and rocking sensations to soothe their infants.

Many hospitals across the country also teach parents the 5 S's – the conceptual principles behind SNOO – as part of discharge education. They give parents very actionable skills to calm

crying and improve sleep. To learn more about the Happiest Baby Educator Program and how you can certify educators to teach the 5 S's at your organization, click here.

14. How can my hospital use SNOO in clinical or QI research?

Happiest Baby's Healthcare Research Program is dedicated to supporting our clinical partners with logistics, networking, study design, and evaluation. Several studies are currently underway to evaluate the impact of SNOO on clinical, quality, and experiential outcomes in both inpatient and outpatient settings. Potential use cases include:

- **Infant care and treatment** – neonatal abstinence syndrome (NAS), late-term premature birth, post-operative care, infant safety and safe sleep
- **Postpartum care** – breastfeeding initiation and continuation, postpartum depression & anxiety, maternal hypertension, maternal bonding & attachment, parental self-efficacy
- **Hospital operations and quality improvement** – reduction of in-hospital falls & associated injuries, adherence to AAP safe sleep recommendations, clinician engagement, clinician performance, nurse time savings
- **Long-term family health and wellbeing** – cognitive development, health care utilization, substance abuse relapse, obesity, weight gain & diabetes, occupational health outcomes

Interested in participating in the program? Click here to submit a research proposal.