Data Collection Plan

This plan outlines expectations for three Newborn Evidence-based Sleep Teaching (NEST) measures: (1) Safe Sleep Practices (SSP) Audit, (2) Chart Review Tool, and (3) Hospital Readiness Assessment. The purpose of NEST data collection is to support consistent safe sleep modeling, education, screening, and systems readiness. Data are used for quality improvement and coaching.

Overview of Data Collection

- Hospitals should **select one unit (well-baby or NICU)** for all NEST data collection and use that unit for the entire cohort year.
- Teams may use paper forms or PDFs for workflow, but **all data must be entered into REDCap.**
- Data from all three measures will be available in Power BI dashboards for real-time review.

Measure	Tool	Frequency
Safe Sleep Practices Audit	Visual crib audit	Monthly
Chart Review	EHR abstraction	Monthly
Hospital Readiness Assessment	Structure survey	Bi-Annual

Safe Sleep Practices (SSP) Audit – Monthly

Purpose: Assess bedside modeling of safe sleep and progress toward consistent, AAP-aligned sleep environments on the selected unit. Focused on what families see and experience at the bedside, recognizing that hospital modeling strongly influences caregiver understanding, expectations, and confidence around safe sleep at home.

Eligibility: Based on the [NEST SSP algorithm](#) (Hwang SS et al., Journal of Perinatology, 2015). In general, infants must be ≥1800 g or ≥34 weeks, without active medical contraindications, and in an open crib or bassinet. Do not include infants who do not meet algorithm criteria.

Population: Sleeping, SSP-eligible infants on the selected unit.

Sample size: Target 20/month (audit maximum available if fewer).

Method: Visual observation only. Do not audit awake infants. These infants do not need to be, and depending on census, likely will not be, the same infants used for chart reviews.
> **Note:** Audit methods will vary based on unit staffing, census, and workflow. Regardless of approach, we strongly recommend varying times, rooms, and staff to promote unit-wide culture change and spread improvement beyond a small group of champions. See FAQs for examples.

If noncompliant: If an infant is observed in an unsafe sleep position or environment, address noncompliance in real time using supportive, non-punitive coaching to reduce risk and model safe sleep for families. Provide supportive education when appropriate and address with staff.

Measures & Definitions: The Safe Sleep Practices audit measures overall compliance, categorizes unsafe sleep to identify patterns, and captures whether unsafe sleep is addressed.

Measure Category	Measure	Definition	Numerator	Denominator
Primary Process Measure	% overall compliance with safe sleep practices	Infants observed meeting all AAP-aligned safe sleep criteria at the time of audit.	# of audits with a fully compliant safe sleep environment	Total # of SSP audits completed that month
Unsafe Sleep Element	Infant not on back	Infant is positioned on their side or stomach rather than flat on their back.	# of audits where this was observed	Total # of SSP audits completed that month
Unsafe Sleep Element	Head of bassinet/crib elevated	Head of crib or bassinet is elevated, tilted, or propped rather than flat.	# of audits where this was observed	Total # of SSP audits completed that month
Unsafe Sleep Element	Unsafe bedding	Thick, loose, or excess blankets or bedding are present in the sleep space.	# of audits where this was observed	Total # of SSP audits completed that month
Unsafe Sleep Element	Infant not dressed safely for sleep	Infant is wearing a hat while normothermic or is not appropriately dressed for sleep (e.g., not safely swaddled or in a sleep sack when applicable).	# of audits where this was observed	Total # of SSP audits completed that month
Unsafe Sleep Element	Extra items in sleep area	Non-essential items or objects are present in the sleep space, including supplies, positioning devices, or personal items.	# of audits where this was observed	Total # of SSP audits completed that month
Unsafe Sleep Element	Infant unattended while asleep not in crib	Infant is asleep on a non-approved surface, such as a swing or bouncer, without direct supervision.	# of audits where this was observed	Total # of SSP audits completed that month
Unsafe Sleep Element	Infant asleep with sleeping caregiver	Infant is asleep while sharing a sleep surface with a sleeping caregiver or engaged in unsupervised skin-to-skin with a sleeping caregiver.	# of audits where this was observed	Total # of SSP audits completed that month
Process Measure - Response	% noncompliance addressed with caregiver or care provider	Unsafe sleep is considered addressed when staff take action to correct it or engage the caregiver or care team in correcting it, using respectful, nonjudgmental guidance.	# of audits where unsafe sleep was observed **and** addressed	Total # of audits where unsafe sleep was observed

Reporting: Enter monthly into REDCap. View in Power BI.

Chart Review tool – Monthly

Purpose: Assess documentation of safe sleep education with teach-back, screening, and resource connection before discharge.

Population: SSP-eligible infants discharged from the same selected unit.

Sample Size: Target 20/month (review maximum available if fewer).

Method: Retrospective EHR review. Charts should be selected as randomly as possible from eligible discharges during the month. These charts do not need to correspond to the infants observed in SSP audits.

Measures & Definitions: The Chart Review measures key safe sleep documentation elements and follow-up and captures birthing person demographics for equity stratification.

Element	Definition	Numerator	Denominator
Safe sleep education using teach-back documented	Documentation indicates safe sleep education was provided using teach-back.	# charts where documented	Total # chart reviews
Home sleep environment screening documented	Documentation indicates caregiver was screened about home sleep environment.	# charts where documented	Total # chart reviews
Home safe sleep needs documented (if indicated)	When screening identifies needs, documentation reflects the specific needs.	# charts where needs were documented	Total # charts where screens were documented
Referral or resource provision documented (if indicated)	When needs are identified, documentation reflects referral or resource provision.	# charts where provision was documented	Total # charts where needs were documented
Education/materials in preferred language documented	Documentation indicates education or materials were provided in preferred language.	# charts where documented	Total # chart reviews

Birthing person demographics are collected to support equity stratification of all chart review measures.

Reporting: Enter monthly into REDCap. View in Power BI.

Hospital Readiness Assessment – Bi-Annual

Purpose: Assess hospital systems, workflows, and infrastructure that support consistent, family-centered safe sleep care. Used by CPCQC for coaching, technical assistance, and tailored support.

Timing: Twice per year (beginning and end of cohort year).

Method: Completed by NEST lead with multidisciplinary team. Items rated 1–5 (not started → fully implemented).

Domains include: Education workflows, staff training, culturally responsive education, screening processes, referral pathways, community resources, team engagement, lived experience considerations.

Reporting: Enter into REDCap twice a year. View in Power BI.

FAQs (Quick Reference)

Sampling approach? Intentionally vary times, rooms, and staff. Avoid convenience sampling. The goal is to capture a realistic snapshot of monthly practice, not perfection.
   Example approaches:
   - Structured shift sampling: Audit 2-3 different shifts (e.g., day, night, weekend) and review the first 3-4 eligible sleeping infants.
   - Bed-space rotation: Start in a different room or bed space each time and move in sequence until your target is met.
   - Defined time windows: Audit all eligible sleeping infants during two different 1-2 hour windows in the month.

Twins/multiples? For both audits and chart review, pick Twin A.

Fewer than 20 infants? Audit/review the maximum available.

Same infants for both measures? No. They are independent samples. It is expected and appropriate that they will be different infants.

Medical exceptions? Do not include infants with active contraindications. Use the SSP algorithm. If unsure, use clinical judgment and document rationale where appropriate.

Who completes audits/reviews? Any trained team member. Consistency matters more than role.

Using data locally? Share results in staff huddles, post run charts or simple visuals, discuss trends or simple visuals, celebrate improvements, identify barriers and test small changes.

Questions? Contact your CPCQC QI advisor or the NEST team. We are here to partner with you.