

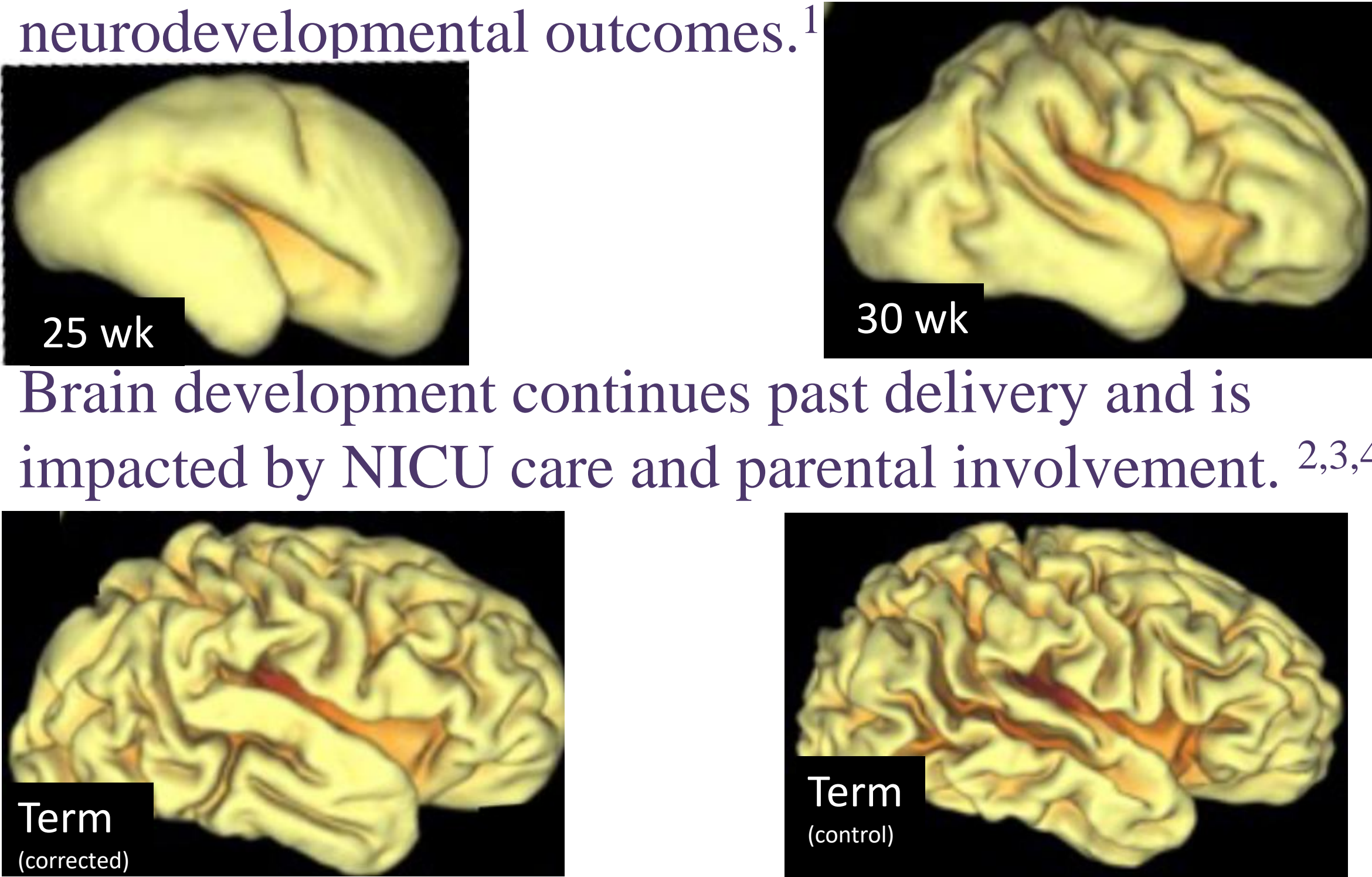
# Protecting and promoting neurodevelopmental care for premature infants: initiation of a neurodevelopmental focus and expectation in a level IV neonatal intensive care unit (NICU)

Kinsey Roth MD, MS<sup>1</sup>, Kelsey Haarbauer, MD<sup>1</sup>, Megan Martino MOT, OTR/L, CNT, NTMTC, CLC<sup>2</sup>, Autumn Keifer, MD<sup>1</sup>

<sup>1</sup>WVU SOM, Department of Pediatrics, Division of Neonatology <sup>2</sup>WVU Medicine Rehabilitation Services

## BACKGROUND

- Premature infants are at increased risk of acquired brain injury and compromised long-term neurodevelopmental outcomes.<sup>1</sup>
- Brain development continues past delivery and is impacted by NICU care and parental involvement.<sup>2,3,4</sup>
- Yearly admissions to the West Virginia University (WVU) NICU have now climbed to over 1000.
- In 2022, the WVU Children's NICU moved locations and had a completely different physical structure including private rooms.
- Upon review, we had a single guideline regarding neurodevelopmental care which was only for infants <29 weeks at birth and based on admission to a pod location in our previous unit.



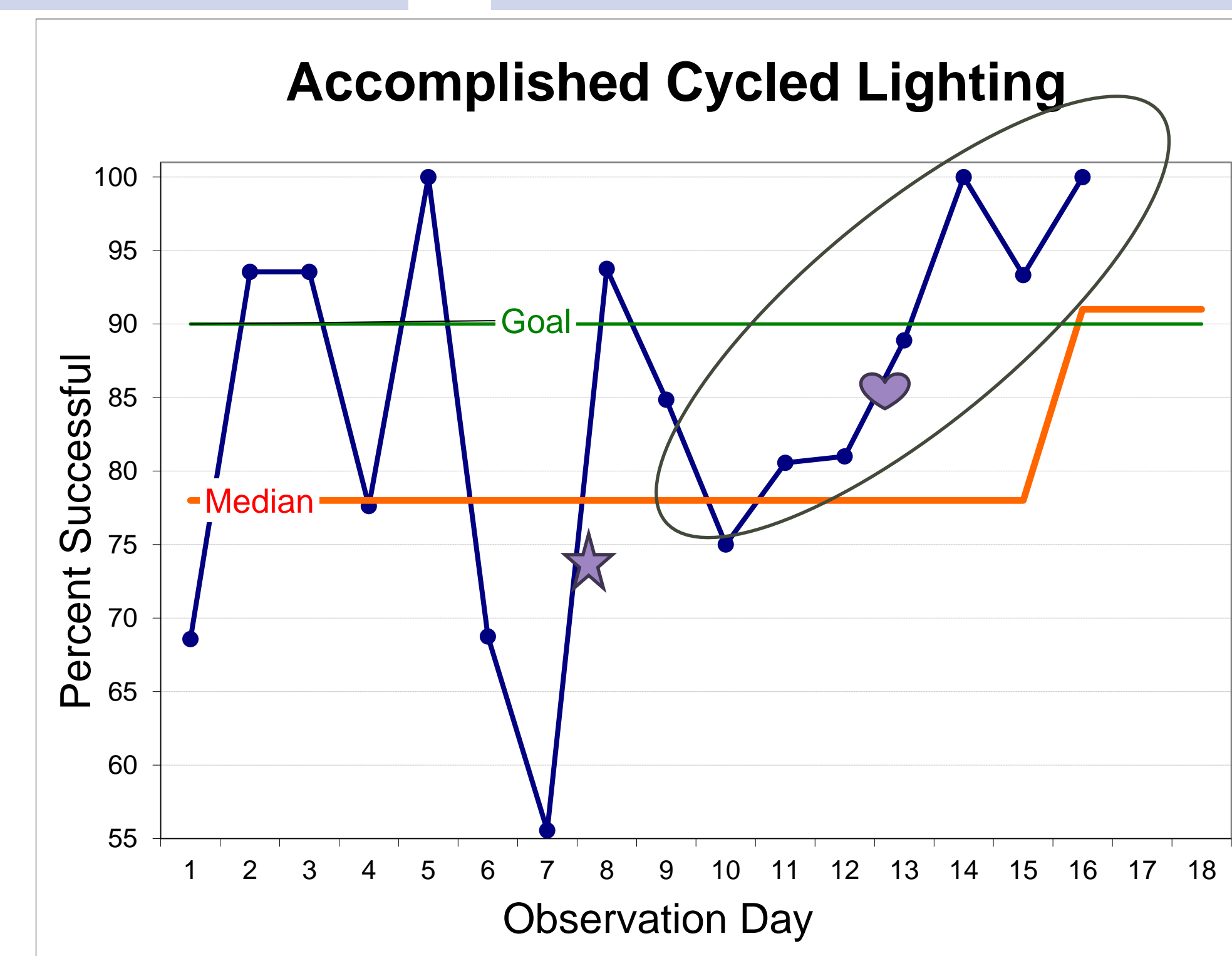
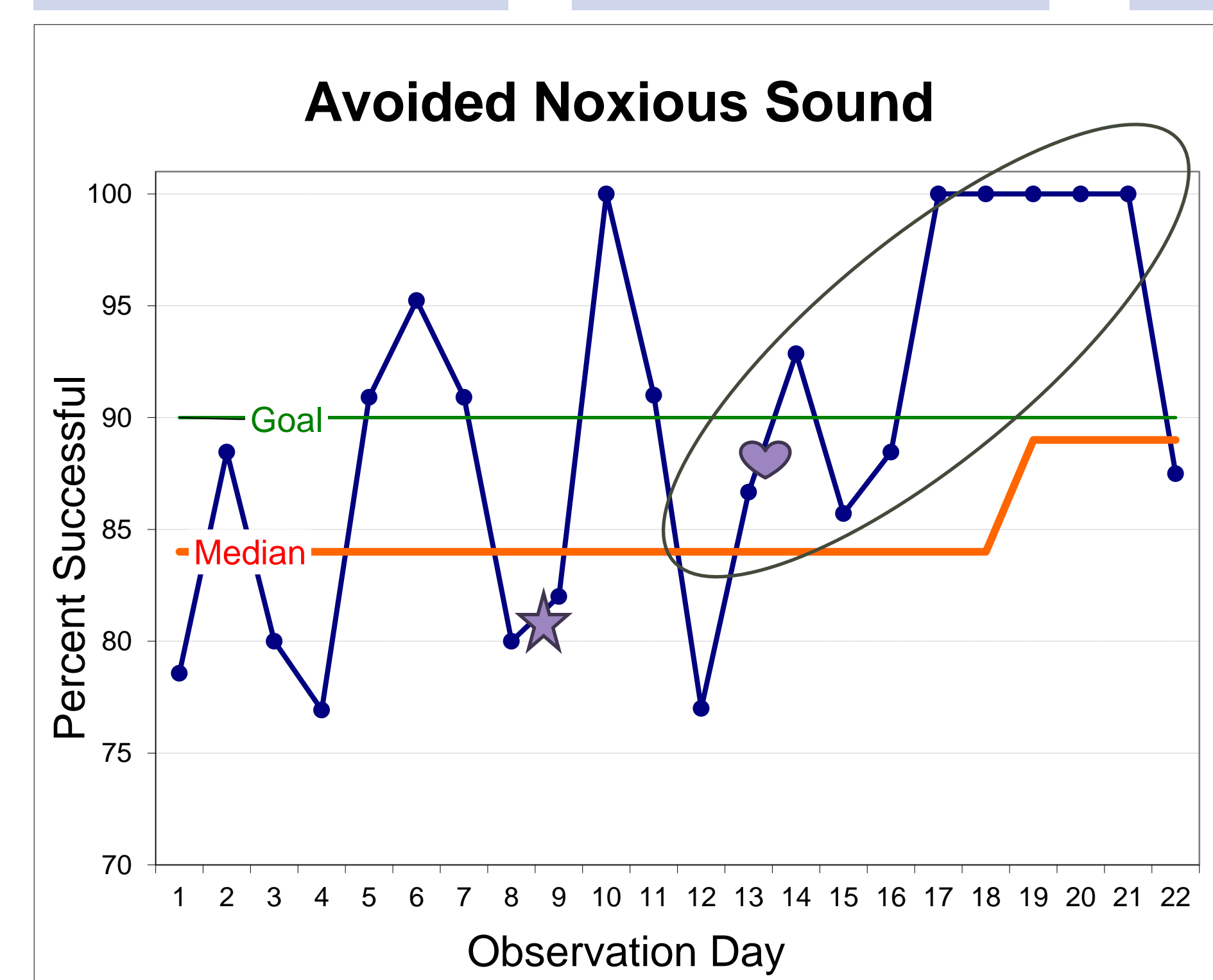
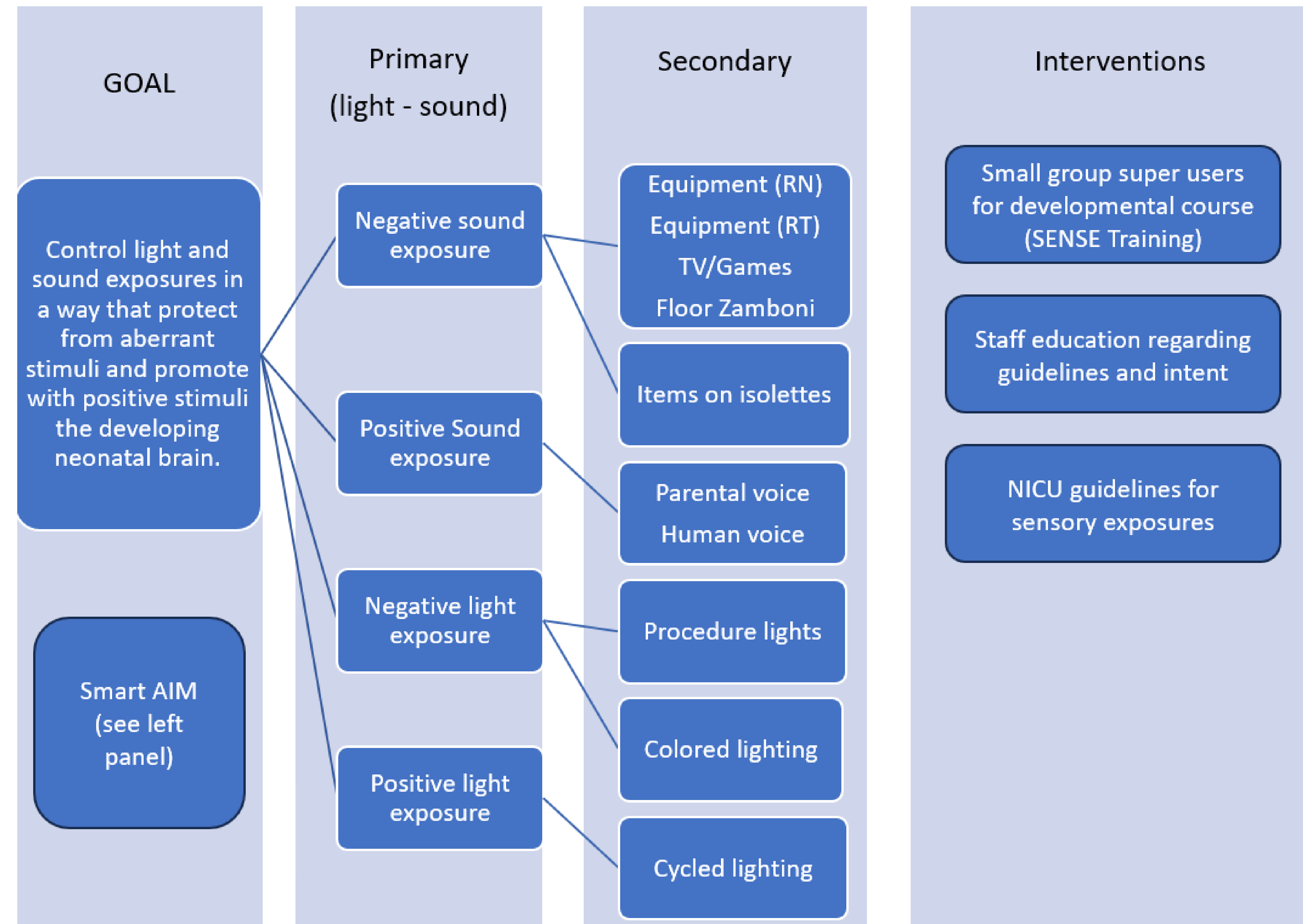
## SMARTER OBJECTIVE

We sought to emphasize a gestationally targeted, neurodevelopmentally appropriate environment by increasing cycled lighting exposure and reducing noxious sound exposure in our NICU as expressed as a 50% decrease in noncompliance by January 2025. This was reviewed monthly with our Vermont Oxford Network (VON) team.



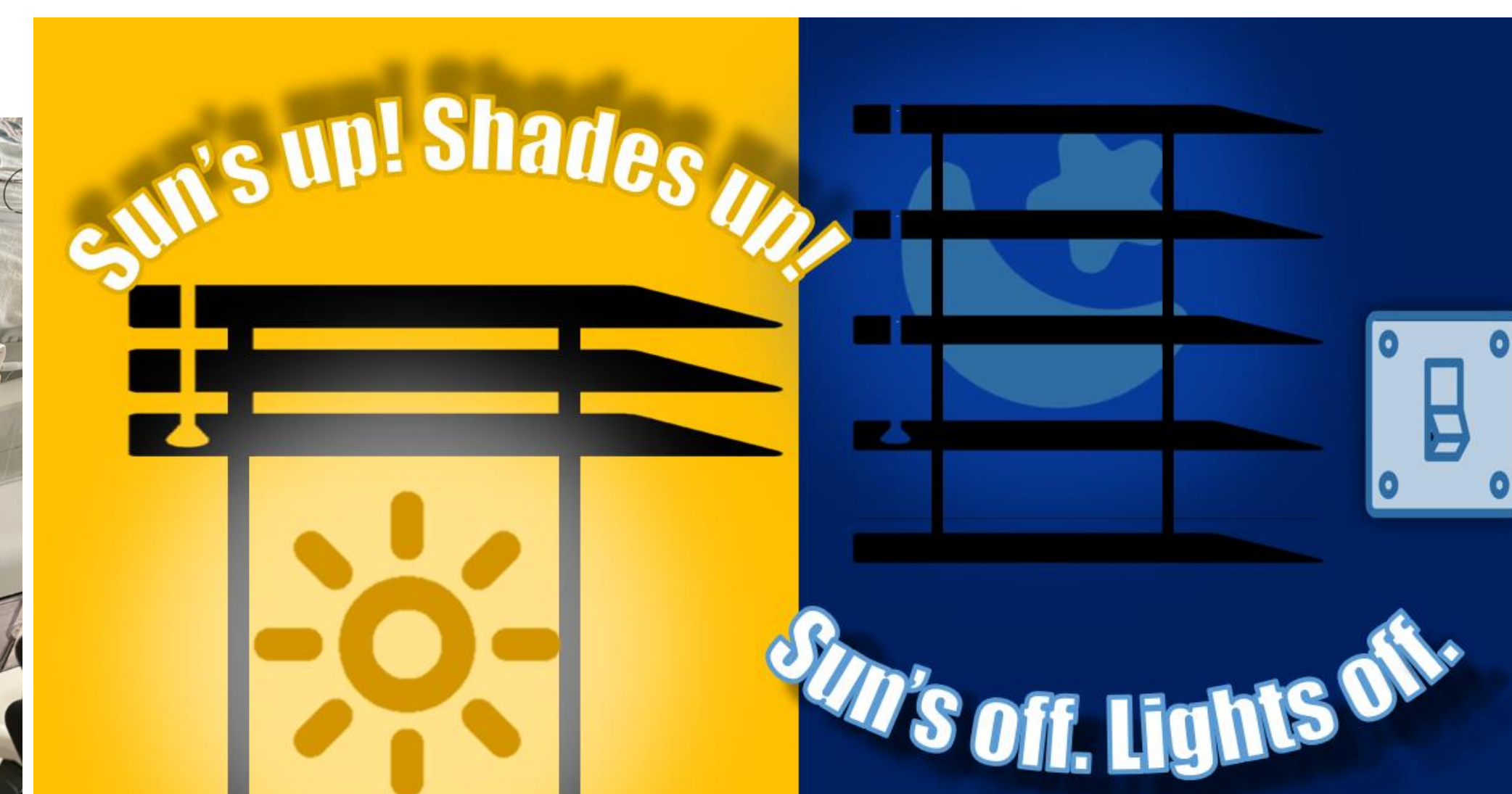
Supporting and Enhancing NICU Sensory Experiences  
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## IMPROVEMENT PLAN -- ACTIONS -- RESULTS



★ PDSA 1: Complete SENSE education (n=200) and roll out for NICU staff and place parent material in each room.

♥ PDSA 2:



## SCALE UP PLAN

- Enhance parent education and interaction by targeting skin-to-skin (kangaroo) care.<sup>5</sup>



- Supplement education for non-NICU base staff.
- Expand VON QI targets, specifically intraventricular hemorrhage (IVH) rates.

## SUSTAINABILITY

- Establish committees for SENSE, VON, and Neurodevelopment.
- Commit to excellence with yearly education and evaluation regarding SENSE, developmental positioning, and skin to skin care.
- High visibility developmental opportunities like the "Babies with Books Readathon" in September and "National Kangaroo-Care Day" in May.

## LESSONS LEARNT

- Buy-in for large change starts with a strong "why" concept and goal.
- When the "why" is broad, assessment of small wins and targeted aims helps achieve change.
- Taking a broad view of who is involved allows for consistent messaging to everyone.

## REFERENCES and ACKNOWLEDGEMENTS

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