

The Call to Translate Data Into Action to Prevent Infant Death

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In this issue of *Pediatrics*, Parks et al¹ analyze rates of sudden unexpected infant death (SUID) by explained and unexplained categories and identify demographic and medical factors associated with SUID using the Centers for Disease Control and Prevention Case Registry. This study highlights 3 critical opportunities to impact SUID rates: (1) consistent data collection and reporting, (2) overrepresentation of preterm infants and infants with recent illness in SUID cases, and (3) the large contribution of soft bedding to SUID cases.

First, every year, nearly 3500 infants suffer SUID in the United States, with no decline in SUID rates in over 2 decades.² The tremendous variability in approaches to investigating and categorizing SUID across counties and states is a significant barrier to obtaining precise estimates of mechanism or cause of infant death. The diagnostic shift that has led to decreasing sudden infant death syndrome rates, increasing rates of accidental suffocation and strangulation in bed and thus stagnant SUID rates, highlights this continued lack of consistent determination of cause of death. Without consistent clinical, death scene, and medical history data for all SUIDs, we lack the ability to understand causal pathways to SUID and thus are limited in intervention development that appropriately targets risky behaviors and environments. With their study, Park et al provide much more granular data surrounding SUID cases compared with what is presently reported from

death certificates when consistent categorization schemes are applied. Yet only 18 states or jurisdictions participate in the SUID Case Registry, a population-based surveillance system built on states' Child Death Review programs that represents 30% of all SUID cases. Given the critical data resulting from the SUID Case Registry, all US states and jurisdictions should be strongly encouraged or mandated to participate.

Second, Parks et al demonstrate the over-representation of medically vulnerable infants in SUID cases with preterm infants and those with recent illness before death, comprising 25% and 16% of all SUID cases, respectively. In addition, nearly 80% of SUID cases occurred when infants were ≤ 4 months old. Given the frequency with which infants with these characteristics and their caregivers interact with health care systems and clinical providers, there are significant opportunities to engage with these families to offer education and support focused on SUID risk reducing practices. Moreover, for infants requiring hospitalization, such as in the NICU for prematurity or on the general pediatric or PICU for acute illnesses like bronchiolitis, it is crucial that safe infant sleep practices are modeled consistently when infants reach medical stability. Indeed, quality improvement efforts in NICUs have demonstrated increased compliance with safe sleep practices during hospitalization³ as well as after discharge from the hospital.⁴ In recent years, additional safe sleep work in

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non-NICU settings is growing, with the hope of standardizing sleep environments throughout health facilities and systems and consistently engaging families about SUID risk reducing practices.⁵

Third, Parks et al demonstrate that of SUID cases categorized as “explained” or “unexplained–possible suffocation,” 74% of airway obstructions were due to soft bedding. In short, 1145 infants may have survived their first year of life had soft bedding not been used during their sleep. This astonishing finding must propel health care providers, public health experts, policy makers, and communities to work at individual, community, health systems, and legislative levels to prevent these avoidable deaths. We need to continue to develop and implement creative strategies to better engage with families about SUID risk-reducing behaviors, such as Moon et al’s use of a 60-day mobile health program focused on safe infant sleep education,⁶ and also potentially target maternal social networks to influence safer sleep norms within families and communities.⁷

Frustratingly, there continues to be an abundance of unsafe sleep objects and devices manufactured and sold throughout the United States.⁸

Although states such as Ohio, Maryland, and New York have banned the sale of unsafe items such as crib bumpers, these soft bedding objects

continue to be manufactured, marketed, and sold.⁸ The Consumer Product Safety Commission voted unanimously in 2020 to proceed with developing a federal safety rule that would ban the sale of crib bumpers that limit airflow. We eagerly await the results of the federal rulemaking process.

In conclusion, this study clearly demonstrates the added value of applying consistent standards to the categorization of SUID, highlighting the critical need for consistent and uniform protocols to be adopted by death scene investigators, public health epidemiologists, and clinical providers at county and state levels. Only with robust, comprehensive, and accurate data can we identify populations with greatest risk and understand causal mechanisms of suffocation to develop targeted interventions to finally move the needle on SUID rates that have seen no decline in over 20 years.

ABBREVIATION

SUID: sudden unexpected infant death

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