

The Use of the Child Fatality Review Committee to Contribute to a Longitudinal Quality Improvement Project on Safe Sleep

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As sudden unexpected infant death rates have plateaued in the United States over the last decade, the rate of sleep-related deaths due to accidental suffocation and strangulation in bed has revealed an upward trend.¹ There has been much focus on infant safe sleep over the last few years to reduce these preventable deaths. The American Academy of Pediatrics revised its sudden infant death syndrome reduction recommendations to include safe sleep environments. These recommendations advise that infants sleep on separate sleep surfaces designed for infants to prevent accidental suffocation, strangulation, layover, or entrapment that could occur in the adult bed, chair, or couch. In addition, the sleeping surface should be free of any loose objects, such as blankets, pillows, or toys, that could obstruct an infant's airway.² Some of the efforts to reduce deaths have included public service campaigns,³ community programs and initiatives, safe sleep education and modeling in the hospital setting, and identifying and addressing barriers to safe sleep.^{4,5} The direct impact of individual interventions on the overall infant mortality rate, measured as infant deaths per 1000 live births, is difficult to determine.

State Child Fatality Review (CFR) teams and Fetal and Infant Mortality Review (FIMR) teams are public health strategies used to understand child and infant deaths at the local level through a multidisciplinary team review. A systematic process is used to collect and analyze data from multiple sources, identify systems-related factors and risks, and make recommendations to improve systematic care, address resource gaps in the community, and reduce preventable deaths.⁶

Krugman and Cumpsty-Fowler⁷ have taken a novel approach using infant sleep-related death rates from the local CFR team to target systematic change within their hospital (Medstar Franklin Square Center, Baltimore, MD). Their longitudinal quality-improvement project was focused on creating a culture of safe sleep with consistent messaging and modeling within their institution, and they used sleep-related deaths of infants discharged from their nursery as the primary outcome measure. By collaborating with the local CFR, the hospital was able to receive feedback when infants who had been born at their hospital and discharged from their nursery died of unsafe sleep environments. The infant deaths were considered sentinel events, and each death was reviewed by using root cause analysis. Through the reviews, the hospital was able to identify process changes that needed to be made to the

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existing infant safe sleep program. Outcome data revealed a reduction in sleep-related death rates of infants discharged from their nursery with no new deaths reported over 22- and 28-month time periods. Using continuous quality-improvement methods over a several-year span, they were able to create a safe sleep culture within their hospital setting, as supported by their qualitative data.⁷

Implementing culture change can be difficult. The first step of Kotter's 8-Step Change Model is to create urgency around the need for change.⁸ Having discussions about local infant mortality rates and, specifically, deaths of patients from your own institution can be a powerful starting point to create urgency and engage staff. Tracking and reviewing infant deaths can reveal why change is needed. Sustainability of change requires systematic, thoughtful planning in conjunction with organizational memory so that changes are embedded within the system and knowledge retention is ensured.⁹

Studies show that some hospital staff continue to be resistant to following safe sleep guidelines.¹⁰ However, staff commitment of modeling and providing consistent safe sleep messaging to caregivers is imperative. Caregivers are more likely to engage in safe infant sleep if these practices are modeled by providers in the hospital.¹¹ In addition, multiple sources of consistent messaging are more likely to increase the likelihood that mothers will practice safe sleep with their infants,¹² and the hospital provides 1 of many opportunities for families to engage in and establish safe sleep practices with their newborns.

When considering the application or implementation of a novel process into one's own environment, it is important to consider the limitations of that process. First, using CFR data of infants born and discharged from one's hospital nursery may be a challenge. Although collaborating with agencies that have access to infant

mortality data, such as a CFR or FIMR team, can be beneficial, state legislation may prohibit collective data sharing among entities because of concern for privacy. Many times, data and recommendations from review teams are presented in a deidentified, aggregate manner and are not available at the institution or patient levels. These issues may be less impactful in areas where only 1 hospital serves the community. Second, there is often considerable lag time in infant mortality data. There can be a lengthy process between the time an infant dies and the time the CFR or FIMR team receives the information to review the case. Third, despite reported improvement in infant mortality rates with quality-improvement interventions, it is still difficult to attribute causality because other factors in the community could also have contributed to the reduction in infant deaths.

Krugman and Cumpsty-Fowler⁷ have described a novel practice that other institutions may wish to explore. Partnering with public health and community programs to better understand key drivers of infant mortality in a specific community can lead to novel and targeted interventions. This precision approach to addressing a problem may contribute to greater success in outcomes, as revealed by the sustained decrease in sleep-related deaths of infants born at Medstar Franklin Square Center.

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