Assessing Safe Sleep: Injury Prevention for Central City Infants

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Sudden Infant Death Syndrome (SIDS) is the second-leading cause of preventable mortality during infancy in the United States. Current literature investigating the pathogenesis of SIDS clearly indicates that an unsafe infant sleep environment is a critical, yet modifiable, external risk factor. Additionally, the racial disparity in infant mortality rates from SIDS between African Americans and other ethnic groups is thought to be directly linked to the ability to provide infants with a safe sleep environment.

My 11-week fellowship project in 2009 aimed to further evaluate current intervention methods and outcomes of the Downtown Health Center (DHC) Cribs for Kids program, which provides safe sleep education and a portable crib to the families of infants less than 6 months old identified as sleeping in an unsafe environment.

The DHC, located in Milwaukee, is a community pediatric clinic that serves low-income central city families living in the ZIP codes with Milwaukee’s highest SIDS and non-SIDS infant mortality rates. Among the DHC’s many injury prevention programs is the Cribs for Kids program directed by pediatrician Suzanne Brixey, MD.

Our research started with the hypothesis that theory-driven patient education about safe sleep practices and SIDS, in addition to provision of a safe sleep environment for infants and feedback-based review of intervention strategies, would increase consistent use of safe sleep practices. This, in turn, would result in an increase of safe sleep environments for infants of low-income background, and likely a decrease in SIDS infant mortality.

My responsibilities included completing multimodal, theory-driven safe sleep education and enrollment with families during infant clinic visits. After enrollment, I contacted families by phone or during clinic visits after 1 week, 2 weeks, 2 months and other times to complete a safe sleep questionnaire. By the end of my fellowship in August 2009, DHC study enrollment was 160 participants, nearly twice the August 2008 enrollment, and close to 100 additional questionnaires were completed successfully.

We also planned an amendment for the existing phone follow-up questionnaire, including questions about patient-perceived barriers to the adoption of safe sleep practices and consistent crib use, such as personal motivation to change, perceived likelihood of their infant’s risk of dying of SIDS in unsafe sleep environments, sleep practices with prior children, first-hand knowledge of a case involving SIDS, and known practices among family and friends.

Pilot data from the Milwaukee Health Department’s DHC questionnaire validation study served as a learning tool for the adaptation of the phone survey to home visit-based follow-up. While the validity of the phone follow-up questionnaire could not be ascertained from the preliminary home visit data obtained, the results helped determine that we were asking relevant questions that could be translated into direct observations in the majority of cases.

Through this fellowship, I had the opportunity to assist in piloting and analyzing both novel and established injury prevention assessment research techniques. Aggregate data from the DHC study population revealed sustained daily crib use and adoption of safe sleep practices in over 80% of enrolled families surveyed up to 1 year after crib distribution. This emphasized to me, as a medical student, the importance of multimodal theory-based patient education and resource provision to disadvantaged communities and the resounding need for extensive collaboration among groups addressing the disproportionate SIDS mortality rate.
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