**Infant illnesses are associated with increased bed-sharing in a U.S. birth cohort**

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**Background:** The American Academy of Pediatrics recommends against infant bed-sharing with parents to reduce the risk of sleep-related infant deaths. The impact of infant illness on bed-sharing practices is unknown.

**Objectives**: A subset of data from an ongoing prospective cohort study of mothers and infants (Pediatric Respiratory Enteric Virus Acquisition and Immunogenesis Longitudinal Cohort study, or PREVAIL) was analyzed to assess the impact of infant illness on bed-sharing.

**Methods**: After maternal enrollment in the 3rd trimester, 245 healthy mother-infant pairs were followed from age 2 weeks through at least 6 months. Breastfeeding and other behavioral co-variates were monitored quarterly. Mothers were queried weekly via text on acute respiratory illness (ARI) and acute gastroenteritis (AGE) in their infants. Mothers of ill infants completed a questionnaire regarding symptoms and bed-sharing during illness. Mothers who reported an infant illness within 30 days before or after the 6 month clinic visit (*n*=100) were selected for matched pair analysis comparing sleep practices reported at the time of this visit with those they reported at the time of illness.

**Results:** At the 6 month clinic visit, bed-sharing was reported for 22% of mother-infant pairs. Bed-sharing was reported most commonly among those who were white, privately insured, and exclusively breastfeeding at week 2 (all *p*<0.05). Of infant illnesses, 87% were ARI, 13% were AGE and, overall, 48% presented with fever. During the infant illness, 36% of mother-infant pairs reported bed-sharing (paired odds ratio [OR]=5.7 (95% CI 1.7 to 19.4, p<0.001). The strongest associations between infant illness and increased bed-sharing were found when the illness was an ARI episode with fever (OR=12.0, p=0.002); among mothers reporting full-time work outside the home (OR=14.0, p<0.001); and when mothers were still breastfeeding at the 6-month visit (OR>16 [infinite], p=0.005).

**Conclusions:** Infant bed-sharing increased significantly during acute illnesses. Bed-sharing practices during acute illnesses were modified by breastfeeding status and working outside the home. This information may be useful in targeting public health messages on bed-sharing risks during infancy. **Funded by CDC**

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