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Measuring Trends in Infant Mortality Due to Unintentional Suffocation

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To the Editor

We read with interest the article by Gao et al,[1] who described an increase in unintentional infant suffocation from 1999 to 2015 in the United States, which was "primarily a result of increases in deaths from suffocation and strangulation in bed."[1] Unfortunately, this study did not fully acknowledge that increased rates in accidental suffocation and strangulation in bed (ASSB) have been partly attributed to diagnostic shifts.[2] Since about 1999, cause-of-death certifiers (medical examiners and coroners) have been moving away from reporting sudden infant death syndrome (SIDS) as a cause of death to other sudden unexpected infant death (SUID) causes such as ASSB.[2] In 1990, 84% of SUIDs were certified as SIDS and 2% as ASSB. In 2015, 42% of SUIDs were certified as SIDS and 25% as ASSB.[2]

Some explanations for this diagnostic shift include increased use of standard scene investigation protocols[3] and changes in the terminology used to certify deaths whose cause cannot be determined with certainty.[4] An autopsy alone cannot identify a case of ASSB from other SUID, and a thorough death scene investigation is imperative to help the forensic pathologists understand the sleep environment circumstances that may have led to an asphyxiation. Even so, there is wide variation in the information that certifiers consider when making a cause-of-death determination for SUID.[4] Additionally, when a medical examiner or coroner cannot explain why an infant died, there is an increasing tendency to report the cause as "unknown" or "undetermined" instead of "SIDS."[4,5] Use of nonstandardized investigation and reporting practices result in inconsistent estimates of cause-specific SUID mortality rates. Inaccurate measurement of infant cause of death hinders the evaluation of temporal trends and associated risk factors, which are key to

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informing strategies to reduce future deaths. Efforts have been made to improve the quality and completeness of SUID investigation and reporting (https://www.cdc.gov/sids/SUIDAbout.htm).

While reporting on trends and characteristics associated with SUIDs is important, the study by Gao et al[1] did not fully discuss critical context for understanding these trends. Acknowledging the diagnostic shift in classifying SUIDs and presenting data for all SUID subtypes would have strengthened the interpretation of findings. The increased rates of ASSB certifications the authors described may not be totally due to an actual increase in ASSB and could be partly attributed to changing diagnostic preferences and improved death investigation practices.

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