

Variation in Occult Injury Screening for Children with Suspected Abuse in Selected U.S. Children's Hospitals

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OBJECTIVE: To describe variation across selected US children's hospitals in screening for occult fractures in children <2 years old diagnosed with physical abuse and in infants <1 year old who have injuries associated with a high likelihood of physical abuse.

METHODS: We performed a retrospective study of children <2 years old with a diagnosis of physical abuse and infants <1 year old with non-motor vehicle crash-associated traumatic brain injuries or femur fractures admitted to 40 hospitals within the Pediatric Hospital Information System database from January 1, 1999, to December 31, 2009. We examined variation among the hospitals in the performance of screening for occult fractures as defined by receipt of skeletal survey or radionuclide bone scan. Marginal standardization implemented with logistic regression analysis was used to examine hospital variation after adjusting for patient demographic characteristics, injury severity, and year of admission.

RESULTS: Screening for occult fractures was performed in 83% of the 10,170 children <2 years old with a diagnosis of physical abuse, 68% of the 9942 infants who had a traumatic brain injury, and 77% of the 2975 infants who had femur fractures. After adjustment for patient characteristics, injury severity, and year of admission, hospitals varied significantly in use of screening for occult fractures in all 3 groups of children.

CONCLUSIONS: The observed variation in screening for occult fractures in young victims of physical abuse and infants who have injuries associated with a high likelihood of abuse underscores opportunities to improve the quality of care provided to this vulnerable population.

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