

# Disparities in the evaluation and diagnosis of abuse among infants with traumatic brain injury

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**OBJECTIVE:** To evaluate in a national database the association of race and socioeconomic status with radiographic evaluation and subsequent diagnosis of child abuse after traumatic brain injury (TBI) in infants.

**METHODS:** We conducted a retrospective study of infants with non–motor vehicle–associated TBI who were admitted to 39 pediatric hospitals from January 2004 to June 2008. Logistic regression that controlled for age, type, and severity of TBI and the presence of other injuries was performed to examine the association of race and socioeconomic status with the principal outcomes of radiographic evaluation for suspected abuse and diagnosis of abuse. Regression coefficients were transformed to probabilities.

**RESULTS:** After adjustment for type and severity of TBI, age, and other injuries, publicly insured or uninsured infants were more likely to have had skeletal surveys performed than were privately insured infants (81% vs 59%). The difference in skeletal survey performance for infants with public or no insurance versus private insurance was greater among white (82% vs 53%) infants than among black (85% vs 75%) or Hispanic (72% vs 55%) infants ( $P = .022$ ). Although skeletal surveys were performed in a smaller proportion of white than black or Hispanic infants, the adjusted probability for diagnosis of abuse among infants evaluated with a skeletal survey was higher among white infants (61%) than among black (51%) or Hispanic (53%) infants ( $P = .009$ ).

**CONCLUSIONS:** National data suggest continued biases in the evaluation for abusive head trauma. The conflicting observations of fewer skeletal surveys among white infants and higher rates of diagnosis among those screened elicit concern for overevaluation in some infants (black or publicly insured/uninsured) or underevaluation in others (white or privately insured).

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