

observed differences in the ICCs between children and adults were not statistically significant.

CONCLUSION: The estimated ICCs should be incorporated in sample size calculation for any multicenter trauma study that uses exclusively exposed or unexposed clusters of patients. Although the lack of difference between children and adults could be attributed to the similarity of heterogeneity in hospital and pre-hospital care between these two groups, the wide confidence intervals for the point estimates should not be overlooked.

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P66

REGIONAL VARIATION IN DUST ALLERGEN LEVELS IN THE HOMES OF URBAN CHILDREN WITH ASTHMA

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PURPOSE: Studies of inner-city asthmatic children have shown significant regional variation in dust allergen exposures. The home environment of asthmatic children in the Gulf South region of the U.S. has not been characterized. This study describes indoor dust allergen levels and characteristics of asthmatic children in New Orleans and explores regional variability in dust allergen exposure.

METHODS: Data were used from baseline home visits of children in the New Orleans Healthy Homes Initiative. Interview, visual observation and environmental dust sampling data of 86 children between 4–17 years of age were analyzed.

RESULTS: Seventy-seven percent of households had moderate (> 2.0 – 9.9 $\mu\text{g/g}$) or high (≥ 10.0 $\mu\text{g/g}$) levels of either Der p 1 or Der f 1 dust mite allergen and 56.6% had high (> 2.0 – 8.0 U/g) or very high (> 8.0 U/g) levels of cockroach allergen (Bla g 1). The prevalence of high (> 10 $\mu\text{g/g}$) levels of dog (Can f 1) allergen was 25.3% and few households (4.8%) had high cat allergen (Fel d 1) levels (> 8.0 $\mu\text{g/g}$). Households with average humidity levels $> 50\%$ were three times more likely to have elevated dust mite levels (odds ratio = 3.2; 95% CI = 1.1, 9.3; $p=0.03$). Home ownership and education level was associated with roach and dust mite allergen levels.

CONCLUSIONS: Our findings reinforce evidence of regional variability in dust allergen exposure levels. Children living in the Gulf South may be exposed to a greater number of allergens at levels known to cause sensitization than in other regions of the country.

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P67

THE PREVALENCE OF BLOOD LEAD LEVELS $\geq 5\text{G/DL}$ AMONG 1 TO 21 YEAR OLD U.S. POPULATION AND TRENDS FROM 1988–1994 THROUGH 1999–2002

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PURPOSE: Elevated blood lead in children is defined as $\geq 10\mu\text{g/dl}$. In light of data suggesting adverse health effects at blood lead levels (PbB) $< 10\mu\text{g/dl}$, lowering the current definition has been recommended. To ascertain the population level impact of such a change, we calculated the prevalence and distribution of PbB $\geq 5\mu\text{g/dl}$ in 1 to 21 year old population in the United States. Furthermore, we characterized changes in PbB between 1988–1994 and 1999–2002.

METHODS: We analyzed data from the National Health and Nutrition Examination Survey (NHANES) III ($n=10,755$) and NHANES 1999–2002 ($n=8,013$).

RESULTS: Between 1988–1994 and 1999–2002, the geometric mean PbB declined from $2.88\mu\text{g/dl}$ to $1.94\mu\text{g/dl}$ in children 1 to 5 years, $1.80\mu\text{g/dl}$ to $1.36\mu\text{g/dl}$ in children 6 to 11 years, and $1.24\mu\text{g/dl}$ to $1.02\mu\text{g/dl}$ in children and adolescents 12 to 21 years of age. Also, the prevalence of PbB $\geq 5\mu\text{g/dl}$ declined from 25.7% to 8.8%, 12.8% to 3.0%, and 7.5% to 1.2% in these age groups, respectively. In 1999–2002, a disproportionately higher prevalence of PbB $\geq 5\mu\text{g/dl}$ was present among children 1 to 5 and 6 to 11 years old who were non-Hispanic blacks, had lower household income, were not home owners, and lived in older housing. Among 12 to 21 year olds, having lower income levels, male sex, and no health insurance were each associated with a higher prevalence of PbB $\geq 5\mu\text{g/dl}$.

CONCLUSIONS: Despite an overall decline in PbB, a substantial proportion of children (approximately 2.4 million) may be at risk for adverse health effects from lead exposure.

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P68

PREVALENCE OF LEARNING DISABILITY AMONG UNITED STATES CHILDREN WITH ASTHMA AND DIABETES

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PURPOSE: Learning disability is common among United States (US) children and affects about 1 in 10. The likelihood of learning disability is high among children with multiple special health care needs. To purpose of this project was to explore the association of learning disability with two most common childhood chronic diseases, asthma and diabetes.

METHODS: Prevalence of learning disability among children under the age of 18 with asthma and diabetes were calculated using the data from 2003 National Survey of Children's Health (NSCH). The NSCH was designed to produce national and state-specific prevalence estimates for a variety of health indicators and measures of children's health. Data analyses were done by SAS callable SURVEYLOGIT in order to account for the complex survey design and to calculate accurate variance statistics.

RESULTS: Prevalence of learning disability is higher in US children under the age 18 with asthma and diabetes compared to those without. Among children without asthma it was 9.0% (95% CI 8.7, 9.4) compared with 14.4% (95% CI 13.2, 15.4) among children with asthma (OR=1.7, 95% CI 1.5, 1.9). Similarly, prevalence of learning disability among children without diabetes was 9.7% (95% CI 9.4, 10.1), compared with 18.3% (95% CI 12.7, 25.6) among children with diabetes (OR=2.1, 95% CI 1.4, 3.2). The