

GALVESTON COUNTY HEALTH DISTRICT

4C's Clinics, Public Health Programs, Galveston E.M.S.

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Notes on the Prevalence of Elevated Blood Lead In Galveston County

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Galveston County Health District (GCHD) began collecting reports of elevated blood lead in 1992. Through 2003, reports have been received on approximately 2,000 residents with blood lead levels of 10 micrograms per deciliter (mcg/dL) or higher. The majority of cases had blood lead levels in the 10-14 mcg/dL range. The GCHD Pollution Control Division attempts to conduct environmental assessments for all cases with blood lead levels of 20 mcg/dL or higher plus others upon request. There have been over 300 cases with lead levels of 20 mcg/dL or higher.

Blood lead screening is most important for children under age 6 because they are most susceptible to health effects from lead exposure, and most reported cases are children detected through blood lead screening. In 2003, for example, a total of 104 cases were reported and 96% were under age 6. Adult cases are occasionally reported, usually with occupational exposures. A few have had serious exposures with health effects. Males usually outnumber females but not by a large margin; the division by sex was nearly equal in 2003. Numerous cases have occurred in all three major ethnic groups (black, Hispanic, and white non-Hispanic). Black and Hispanic children appear to be over-represented among the cases but ethnicity information is not included in many reports. By city over 80% of reported cases have been Galveston residents. Texas City has had the next highest numbers but far less than Galveston.

Blood lead screening data collected by the Health District and the Texas Department of Health Childhood Lead Poisoning Prevention Program for 2001-2003 show that 2.8% of tested Texas children under age 6 had elevated blood lead in comparison to 11.5% of Galveston County children. There were 649,635 Texas children under age 6 tested, including 3,540 Galveston County children, during the three years. Within Galveston County, Galveston had by far the highest number (349) and percentage (17.8%) of children with elevated blood lead. There were 23 Texas City children reported with elevated blood lead during 2001-03 so 372 (91%) of the 408 Galveston County children under age 6 reported with elevated blood lead were residents of Galveston or Texas City during the three years.

The principal sources of exposure in Galveston County at this time are leaded paint and contaminated soil, with old paint the most common source of soil contamination. No cases with exposure from drinking water have been reported so far.

Galveston is one of the oldest cities in Texas and is recognized for its numerous old buildings, many of which are residential. According to the 2000 Census, the city had a total of 29,957 housing units, with 33% built before 1950 and 47% built before 1960. In Texas City 16% of the 16,674 housing units were built before 1950 and 37% were built before 1960. Leaded paint was not banned from residential use in the United States until 1978.

Poverty is a risk factor for elevated blood lead because it increases the likelihood of related conditions such as inadequate nutrition and residence in old, deteriorated housing. Galveston had 3,795 total resident children under age 5 according to the 2000 Census with 36% below poverty level. In Texas City 23% of the 2,833 children under age 5 were below poverty level.