

A Survey of Pediatric Providers' Knowledge, Attitudes and Practices for Childhood Lead Poisoning in Miami-Dade County

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Background: Despite recent declines in elevated blood lead levels among children in the United States, lead poisoning remains one of the most serious, yet preventable environmental health threats to children in this country. Approximately 500 cases of pediatric lead poisoning are reported annually to the Miami-Dade County Health Department. It is estimated that these 500 cases represent less than 10% of all children with lead poisoning in Miami-Dade County. Screening rates in Miami are unknown, but are thought to be quite low in light of a 1999 General Accounting Office (GAO) report which found that only 17% of all Medicaid children in Florida were screened for lead poisoning. To assess screening practices in Miami-Dade County, we undertook a survey of pediatric providers to determine their knowledge, attitudes and practices with regard to childhood lead poisoning.

Methods: A standard questionnaire was mailed to licensed pediatricians, family practitioners and general practitioners in Miami-Dade County (N=369) in November 1999. A second mailing was sent to non-responders in December 1999. Continued non-responders were telephoned in early January 2000 to prompt them to return the survey. Providers were asked about their

knowledge, attitudes and practices around screening children for lead poisoning.

Results: A total of 209 (62%) providers returned the survey; 109 (51%) did not provide general pediatric care and were not eligible to fill out the questionnaire. Information on lead screening practices was available for 102 clinicians whose responses form the basis of our analysis. Of these, 52 (51%) were pediatricians, and 67 (66%) attended medical school outside the United States. Fifty-nine (60%) providers believe that the prevalence of lead poisoning in Miami-Dade County is lower than the national average. Almost half (47%) reported screening all children for lead poisoning. An additional 36 (35%) providers screen high-risk children for lead poisoning. When asked how they define 'high risk' for lead poisoning, 65% of providers named 'having a sibling with lead poisoning', as 'high-risk'; 54% named 'age of housing', 52% 'remodeling/renovation of house'; 20% 'enrollment in Medicaid' and just 9% defined 'receipt of any type of public assistance' as 'high-risk' for lead poisoning (see Table 1). Family and general practitioners are less likely to screen children for lead poisoning than pediatricians (8% vs 32%, P=0.02, see figure 1). More than half (56%) of respondents reported providing education to all parents on how to prevent childhood lead poisoning. Almost 50% believe water/plumbing is an important source of lead in Miami-Dade County; only 64% said paint chips are an important source of lead in the county, and just 31% considered soil a significant source of lead in Miami-Dade County. Forty (39%) providers said they lacked information about the risk of lead

poisoning. The most frequently cited barriers to screening for lead poisoning were lack of follow-up by parents (39%) and lack of information on lead poisoning (39%).

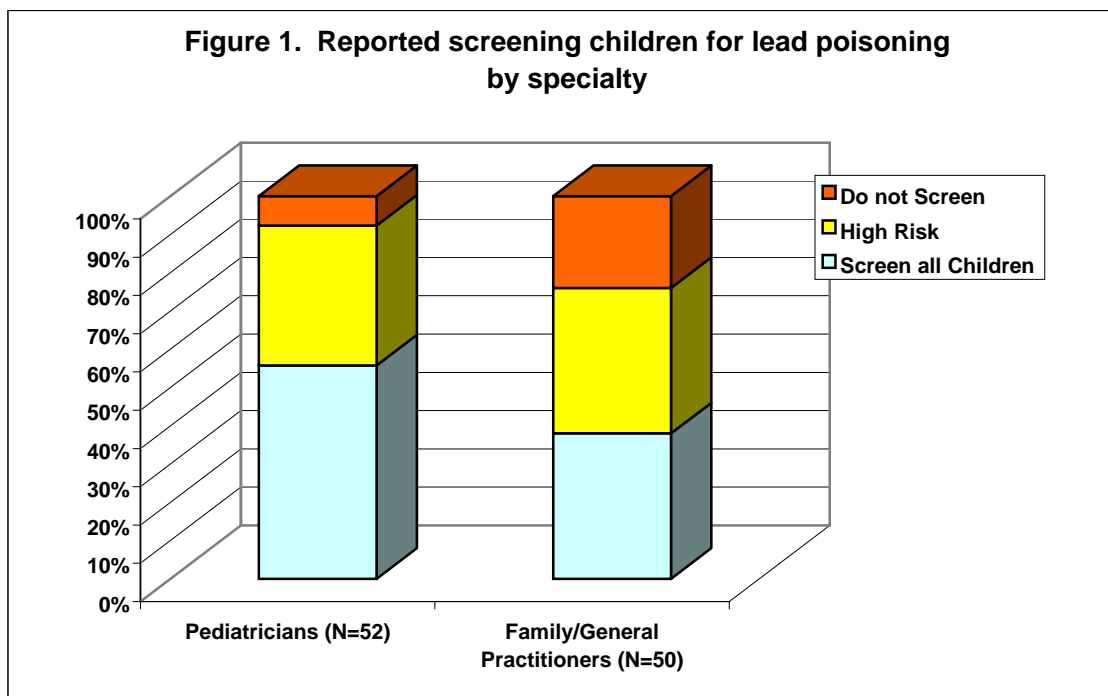
Table 1. Factors Used by Providers to Define "High-Risk" for Lead Poisoning (N=102)

High Risk Factors	%
Sibling with lead poisoning	65
Age of housing	54
Remodeling/renovation of house	52
Enrollment in Medicaid	20
Zip code	10
Receipt of any other public assistance	9

Conclusions: Most pediatric providers report screening at least high-risk children for lead poisoning. However, many physicians are unaware of important risk factors and may not be identifying high-risk children. In addition, there was a relatively low response rate (62%) to this survey. Those physicians who did not respond may

be less likely to screen than those who did respond.

Many physicians were also unaware of important sources of lead exposures. Based on results of environmental investigations of homes, paint and soil are the most common sources of lead exposure, while lead in water has not been found to be a source of exposure among children reported with lead poisoning in Miami-Dade County. Providers' reported lack of information on childhood lead poisoning and lack of knowledge about important sources of lead exposure and risk factors for lead poisoning illustrate the need for provider education on this public health problem in Miami-Dade County.



Monthly Report
Selected Reportable Disease/Conditions in Miami-Dade County, May, 2000

Diseases/Conditions	Reported Cases this Month	2000 Year to Date	1999 Year to Date	1998 Year to Date
AIDS ^{*Provisional}	64	608	654	633
Amebiasis, Acute	1	3	6	11
Campylobacteriosis	19	39	33	22
Chancroid	0	0	0	0
<i>Chlamydia trachomatis</i>	312	1754	1800	834
Ciguatera Poisoning	0	0	0	0
Cryptosporidiosis	0	1	4	4
Cyclosporiasis	0	0	0	1
Diphtheria	0	0	0	0
<i>E. coli</i> , O157:H7	0	1	0	2
<i>E. coli</i> , Other	0	0	0	1
Encephalitis	0	0	0	0
Giardiasis, Acute	8	12	26	20
Gonorrhea	229	1354	1216	610
Granuloma Inguinale	0	0	0	0
<i>Haemophilus influenzae</i> B (invasive)	0	0	0	0
Hepatitis A	7	30	28	56
Hepatitis B	10	18	15	26
HIV ^{*Provisional}	173	782	664	720
Lead Poisoning	49	167	Not available	Not available
Legionnaire's Disease	0	0	0	1
Leptospirosis	0	0	1	4
Lyme disease	1	3	0	0
Lymphogranuloma Venereum	0	0	0	2
Malaria	11	13	11	10
Measles	0	0	0	0
Meningitis (except aseptic)	0	7	13	12
Meningococcal Disease	4	11	6	5
Mumps	0	1	2	0
Pertussis	0	3	7	10
Polio	0	0	0	0
Rabies, Animal	0	0	0	1
Rubella	0	0	0	0
Salmonellosis	13	50	68	71
Shigellosis	16	42	45	68
<i>Streptococcus pneumoniae</i> , Drug Resistant	16	85	78	40
Syphilis, Infectious	8	57	30	14
Syphilis, Other	73	345	392	246
Tetanus	0	0	0	0
Toxoplasmosis	0	0	0	0
Tuberculosis ^{*Provisional}	25	105	97	128
Typhoid Fever	0	0	15	2
<i>Vibrio cholera</i>	0	0	0	0
<i>Vibrio</i> , Other	0	0	0	1

*Data on AIDS are provisional at the county level and is subject to edit checks by state and federal agencies.

** Data on tuberculosis are provisional at the county level.