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Blood Lead Level Screening of Medicaid-Eligible Children In High Risk Areas of Miami-Dade County

Alicia Camps, MD, MSGPM; Anthony Llau, BS, MPH
Miami-Dade County Health Department
Childhood Lead Poisoning Prevention Program

Introduction

The presence of lead in children's blood can adversely affect their health. Blood lead levels (BLLs) as low as 10 µg/dL have been associated with negative effects on a child's development, including cognitive impairment and lower IQ scores[1]. At extremely high levels (≥45 µg/dL), lead poisoning can cause seizures, comas, and even death in children[1]. Although mean blood lead levels have declined in the United States since the mid-1970's, lead poisoning remains a prevalent public health problem among children. Results of the 1999-2002 National Health and Nutrition Examination Surveys (NHANES) show that children aged 1-5 years have the highest prevalence of elevated BLLs (1.6%). Thus, approximately 310,000 children in this age group are at risk of exposure to harmful lead levels[2].

One of the objectives of the Miami-Dade County Health Department Childhood Lead Poisoning Prevention Program (CLPPP) is to increase BLL screening rates among high-risk children. Those at greater risk of lead exposure are Medicaid-eligible children, minorities, and low income families. They are at risk primarily due to deteriorated paint in poorly maintained housing units, house dust, and soil contaminated by lead paint (Table 1)[3]. Children less than 2 years of age are at the greatest risk of lead poisoning due to hand-to-mouth activity, higher nervous system susceptibility, and increased absorption of ingested lead.

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Fermin Leguen MD, MPH

Chief Physician, Miami-Dade County Health Department

Director, Office of Epidemiology and Disease Control

8600 NW 17th Street
Suite 200
Miami, Florida 33126

Tel: (305) 470-5660
Fax: (305) 470-5533

E-mail:
fermin_leguen@doh.state.fl.us

Figure 1. Priority Groups for Screening[3]

- Children aged 6 to 72 months who live in or are frequent visitors to deteriorated housing built before 1950.
- Children aged 6 to 72 months who live in housing built before 1950 with recent, ongoing, or planned renovation or remodeling.
- Children aged 6 to 72 months who are siblings, housemates, or playmates of children with known lead poisoning.
- Children aged 6 to 72 months, whose parents or other household members participate in a lead-related occupation or hobby.
- Children aged 6 to 72 months, who live near active smelters, battery recycling plants, or other industries likely to result in atmospheric lead release.

In recent years the CLPPP has distributed screening guidelines to primary care physicians and pediatricians based on recommendations from the Centers for Disease Control and Prevention (CDC)[4]. Since then, the number of screenings in Miami-Dade County has increased four fold[5].

In 1989, Federal Law mandated BLL screening of 1 and 2-year-old children as a routine part of Medicaid services. Even though a certain number of Medicaid-eligible children are screened for lead poisoning through well-baby visits, there are an increased number of eligible children who are not tested every year due to a poor compliance of medical providers with this federal mandate[6]. The purpose of this report is to ascertain BLL screening rates among Medicaid-eligible children ≤ 2 years old who live in high risk areas of Miami-Dade.

Methods

To assess screening rates, the CLPPP analyzed reimbursement data for Medicaid providers in high risk zip codes from 1999 to 2004. Data analyses were performed using SPSS.

Definitions:

Target population: Medicaid-eligible children ≤ 2 years old who live in high risk areas of Miami-Dade.

High Risk Area: zip code areas with more than 27% of housing units built before 1950.

Results

The screening rates in target zip codes climbed from 22% (1554/7023) in the fiscal year 1999-2000 to 34% (2632/7803) in the year 2003-2004, a 54.5-percent increase (Table 1). The percentage of children who had at least one well-baby visit slightly increased from 60% in 1999-2000 to 68% in 2003-2004. Sixty-nine percent (1639/5316) of Medicaid recipients from high risk areas who had at least one

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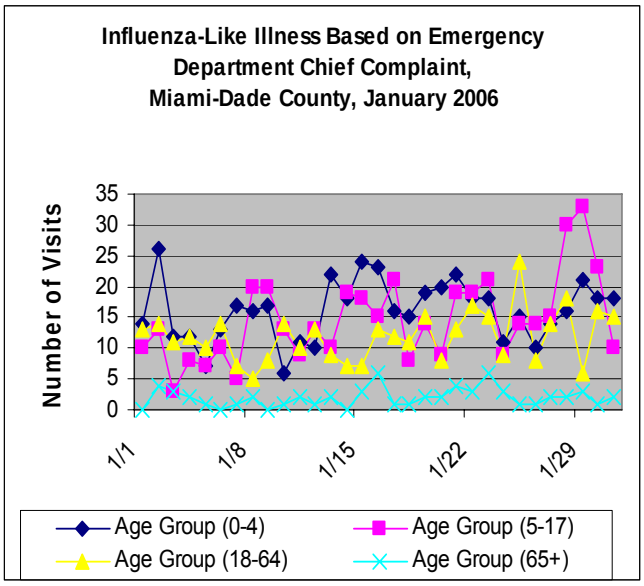
Influenza-Like Illness (ILI) Surveillance
Miami-Dade County, January 2006

On a daily basis, 7 Miami-Dade County hospitals transmit Emergency Department chief complaint data to the Office of Epidemiology and Disease Control. This data is then categorized into several syndrome categories. Influenza-like illness includes complaints of fever with either cough or sore throat. It can also include a chief complaint of "flu".



In January, the highest number of ILI-related emergency department visits occurred in the pediatric age groups, with a median of 16 and 14 visits in the 0-4 and 5-17 age groups, respectively. Adults aged ≥ 65years had the fewest number of ILI visits in January (median=2).

Overall, the number of influenza-like illness visits to Miami-Dade County emergency departments has been increasing since November.

AVIAN FLU WATCH

Unless indicated, information is current as of March 1, 2006

- **Since 2003, 174 human cases of avian influenza (H5N1) have been confirmed** by the World Health Organization (WHO). Of these, 94 have been fatal.
- **Countries with confirmed *human* cases** include Cambodia, China, Indonesia, Thailand, Vietnam, Iraq, and Turkey.
- **No human cases of avian influenza (H5N1) have been reported in the United States.**
- **Authorities in Germany announced detection of H5N1 avian influenza in a domestic cat** found dead on the northern island of Ruegen. Since mid-February, more than 100 wild birds have died there, and tests have confirmed H5N1 in several. There is no evidence that domestic cats play a role in the H5N1 transmission cycle. No human case has been linked to exposure to a diseased cat. No outbreaks in domestic cats have been reported. Unlike the case in birds, there is no evidence that domestic cats are a reservoir of the virus. All available evidence indicates that cat infections occur in association with H5N1 outbreaks in birds.
- **H5N1 has been confirmed in *birds* in several other countries in 2005-2006**, including Austria, Azerbaijan, Bulgaria, Cambodia, China, Croatia, France, Germany, Greece, Hungary, Hong Kong, Indonesia, Italy, Japan, Kazakhstan, Korea, Laos, Malaysia, Mongolia, Niger, Nigeria, Romania, Russia, Slovak Republic, Slovenia, Thailand, Turkey, Ukraine, and Vietnam (Updated 03/02/06).
- **No restrictions on travel to affected countries have been imposed.** Travelers should avoid contact with live poultry and monitor their health for ten days after returning from an affected country.

SOURCES: World Health Organization; World Organisation for Animal Health; Centers for Disease Control and Prevention

Table 1. BLL Screening of Medicaid Recipients[a] in High Risk Areas[b], 1999-2004 [c].

	1999-2000 N (%)	2000-2001 N (%)	2001-2002 N (%)	2002-2003 N (%)	2003-2004 N (%)
Medicaid Recipients	7023	7664	7404	7462	7803
Children Screened for Lead (Among Medicaid Recipients)	1554 (22)	1752 (23)	2166 (29)	1471 (20)	2632 (34)
Children with 1 or more well-baby visits (Among Medicaid Recipients)	4193 (60)	4746 (62)	4546 (61)	5128 (69)	5316 (68)
Children Screened for lead (Among Medicaid Recipients who had at least 1 well-baby visit)	1310 (31)	1456 (31)	1707 (38)	1023 (20)	1639 (31)

[a] Children ≤ 2 years old

[b] Zip codes: 33125, 33126, 33127, 33128, 33129, 33130, 33131, 33132, 33133, 33134, 33135, 33136, 33137, 33138, 33139, 33140, 33141, 33142, 33144, 33145, 33147, 33150

[c] Fiscal years run from July 1-June 30.

well-baby annual visit did not receive a lead screening test in 2003-2004. This result is consistent with the low compliance rates observed since 1999 in these areas.

Discussion

Although the frequency of well-baby visits among children ≤ 2 years old in target zip codes has slightly improved, there is still a high proportion of eligible children who do not complete these visits. Further, BLL screening rates are still low even among children who do adhere to well baby visit recommendations. This suggests that physician non-compliance with BLL screening recommendations should be a reason of concern to Medicaid and local health authorities. Several reasons could explain this low physician compliance with a Medicaid mandate, among them perhaps the presence of other concerns that dominate clinic visits or cost/reimbursement issues associated with BLL screening. CLPPP plans to increase outreach efforts to parents and non-compliant physicians in order to improve screening rates among Medicaid children who live in high risk areas.

The CLPPP expects to improve screening rates by providing lead education to physicians newly enrolled in MediPass (the Medicaid primary care case management program) during their monthly orientation sessions. Furthermore, physicians with low screening rates (≤ 30%) will be contacted and educated about screening by phone and/or office visits. The CLPPP will continue to stress

the importance of BLL screening during the well baby visit among parents of high risk Medicaid-eligible children.

References

1. Committee on Environmental Health. Lead Exposure in Children: Prevention, Detection, and Management. Pediatrics 2005; 116(4); 1036-1046.

2. Centers for Disease Control and Prevention. Blood Lead Levels in Young Children-United States, 1999-2002. MMWR 2005; 54(20):513-516.

3. Centers for Disease Control and Prevention, 1991; Preventing Lead Poisoning in Young Children.

4. Pekovic, V, Bustamante M. Screening for Lead Poisoning in Miami-Dade County. Epi Monthly Report 2003; 4(9):1-4.

5. Florida Department of Health Childhood Lead Poisoning Prevention Program, 2005; 2004 Annual Surveillance Report.

6. Last, JM. Public Health and Preventative Medicine 1986. Appleton-Century-Crofts 12th Edition, East Norwalk, Connecticut: 38

7. Vivier, PM, Hogan, JW. A Statewide Assessment of Lead Screening Histories of Preschool Children Enrolled in a Medicaid Managed Program. Pediatrics 2001; 108(2): 29-34.

About the Epi Monthly Report

The Epi Monthly Report is a publication of the Miami-Dade County Health Department, Office of Epidemiology and Disease Control, The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, contact Rodlescia Sneed, Managing Editor, at 305-470-5660.

NOTE: Due to technical problems with our electronic notifiable disease reporting system, the summary of Selected Reportable Diseases/Conditions in Miami-Dade County does not appear in this issue of the Epi Monthly Report. Please check future issues for this data.

TO REPORT ANY DISEASE AND FOR INFORMATION CALL:

Office of Epidemiology and Disease Control

Childhood Lead Poisoning Prevention Program	(305) 470-6877
Hepatitis	(305) 470-5536
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HIV/AIDS Program	(305) 470-6999
STD Program	*(305) 325-3242*
Tuberculosis Program	*(305) 324-2470*