

Epi Monthly Report

Office of Epidemiology and Disease Control



Miami-Dade County
HEALTH DEPARTMENT

Operation Vaccinate to begin February 10

Mary Jo Trepka, MD, MSPH



We will begin smallpox vaccination for phase I recipients (hospital and public health smallpox response teams) on

February 10. We anticipate finishing at the end of March. We do not yet have a start date for phase II (vaccination of first responders and more health care providers).

Training about Smallpox Vaccine Adverse Events The Centers for Disease Control and Prevention (CDC) has just released a Morbidity and Mortality Weekly Report Recommendations and Reports "Smallpox Vaccination and Adverse Events: Guidance for Clinicians". You can access it at <http://www.cdc.gov/mmwr/preview/mmwrhtml/di52cha1.htm>.

The CDC will be broadcasting a satellite program "Clinical Management of Adverse Events Following Smallpox Vaccination: A National Training Initiative" on Tuesday February 4 from 1-2:30 pm. You can view this program at the Miami-Dade County Health Department 1350 NW 14th Street. Please call Carol Wright (305) 513-3486 to register due to limited seating. You can get more

information about this satellite broadcast at <http://www.phppo.cdc.gov/PHTN/smallpox0204.asp>.



To report diseases or for information:

- Office of Epidemiology and Disease Control
 - Childhood Lead Poisoning Prevention Program (305) 623-3565
 - Hepatitis (305) 324-2490
 - Other diseases and outbreaks (305) 324-2413
- HIV/AIDS Program (305) 324-2459
- STD Program (305) 325-3242
- Tuberculosis Program (305) 324-2470
- Special Immunization Program (305) 376-1976
- Nights, weekends, and holidays (305) 377-6751



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Assessment of parents' knowledge, attitudes and practices regarding lead poisoning prevention: preliminary results

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Since the inception of Miami-Dade County Childhood Lead Poisoning Prevention Program (CLPPP) in 1999, one of the most important program goals has been to reduce lead poisoning by educating the community, parents, and health care providers about the risks and prevention measures related to childhood lead poisoning. In order to increase awareness about lead poisoning among parents with young children, CLPPP has used outreach and health education measures in the screening target areas. Twenty-two target areas were defined based on the percentage of pre-1950 housing and previously reported number of cases. In 2001, CLPPP used GIS to identify neighborhood blocks with lead hazards and applied them to the outreach. The zip codes 33168 and 33161 were added to the list of screening target zip codes in fiscal year 2002-2003 as sequence.

Little is known about the underlying knowledge, attitudes and practices (KAPs) regarding childhood lead poisoning, particularly among Haitian and Hispanic families living in target areas. In May 2002, three masters of public health (MPH) students began a door-to-door survey and outreach in the target zip codes 33168 and 33161, to augment CLPPP's health education efforts.

Methods

A convenience sample was selected by cluster sampling from zip codes 33161 and 33168. Census tracts from which the sample was selected were prioritized first by number of housing built before 1950 and then by number of children 6 years of age or younger. Neighborhood blocks within the selected census tracts were used as a convenience sample. From May 1, 2002 to June 30, 2002, the three MPH students at the CLPPP conducted an anonymous, cross-sectional survey of parental KAPs regarding lead poisoning. Interviews were conducted door-to-door and face-to-face among all

children aged 6 years or younger and their parents or guardians in the selected census tracts. Children who were found to be at risk for lead poisoning were referred for screening.

Results

Thirty percent of caregivers that were reached and asked to complete the survey refused to participate. Of the 110 respondents, 40 lived in zip code 33168, and 70 in 33161 zip code area. Fifty nine percent were Haitian, 14.6% were Hispanic, 15.0% were non-Hispanic black, 2.7% were non-Hispanic white, and 8.2 percent were other. A total of 159 children were reached with this effort.

A 33-item structured questionnaire was used which assessed knowledge of parents/guardians regarding lead exposure, health effects, and prevention of lead poisoning in their children.

Forty to fifty percent respondents knew that lead poisoning could cause learning and behavioral problems, as well as affect growth and development. The majority of the respondents did not know that lead poisoning is usually asymptomatic; nevertheless, about 80% believed that all children should be tested. Over seventy percent of respondents knew about main sources and routes of exposure to lead, as well as basic preventive hygiene measures, such as keeping home clean (76%), washing hands (92%), and washing toys/ pacifiers (87%). However, 83%-90% respondents believed incorrectly that immunizations, fully cooked food, and boiling water could protect children from lead poisoning.

A summary lead knowledge score was calculated by adding the number of correct responses (range: 0-33), for a maximum score of 33. The mean lead knowledge score for our respondents was 15.5±5.

About sixty percent of interviewed parents have heard of lead poisoning, but 57% don't know whether lead poisoning is a problem in their community. However, when asked how concerned they were about lead poisoning in their child, 62% replied that they were very concerned.



Table 1. Parental knowledge about childhood lead poisoning (N=110)

Item	Correct Answer	Correct (%)
Which health problems lead causes?		
Learning problems	Yes	50.00
Allergy problems	No	17.27
Growth problems	Yes	46.36
Behavioral problems	Yes	42.73
Diabetes	No	25.45
What way can lead get into child's body?		
Through their mouth	Yes	72.73
Through their nose	Yes	52.73
Through their skin	No	15.4
How can you know if lead is in your home?		
You can see it	No	57.27
You can smell it	No	50.00
It gives you headaches	No	10.91
Test for it	Yes	75.45
Which children should be tested for lead?		
Look sick	No	20.00
Seem tired	No	20.00
Lose weight	No	14.55
All children	Yes	79.09
Where can lead be found?		
Paint	Yes/Maybe	68.18
Household pipes	Yes/Maybe	65.45
Aluminum foil	No	21.82
Gasoline	No	20.00
Water	Yes/Maybe	55.45
Dirt	Yes/Maybe	60.91
Pencils	No	21.82
Fishing weights	Yes	46.36
Dust	Yes/Maybe	59.09
What are ways to protect your child from lead?		
Keep your home clean	Yes	76.36
Give kids their shots	No	17.27
Fully cook food	No	14.55
Wash hands	Yes	92.73
Wash toys and pacifiers	Yes	87.27
No chewing on paint	Yes	99.09
Boil water	No	10.00
Healthy meals	Yes	80.00

When questioned about practices related to lead poisoning, only about 14% parents/guardians reported that one or more of their children had been tested for lead poisoning. Ninety percent of the renters did not receive information about lead hazards when they signed their lease. Only one respondent recalled being told about paint containing lead hazards.

Discussion

Limitations to conducting this outreach included unpredictable weather at the time of survey (e.g. rain and thunder storms), restricted access to homes (e.g., locked fences and dogs), not finding residents at home when going door-to-door unannounced during working hours, and sometimes unreceptive residents, who did not answer the door or refused to participate. When these limitations are taken into consideration, seventy percent response rate achieved in this survey is very good.

Table 2. Parental attitudes about childhood lead poisoning (N=110)

Question	%
Heard of lead poisoning before	59.1
Think lead poisoning is a problem	
Big	28.4
Medium	7.3
Small	7.3
Don't know	56.9
Concerned about lead poisoning in their child	
Very	61.8
Somewhat	7.3
A little	5.5
Not at all	25.5

These preliminary results of the survey provide valuable information in guiding CLPPP health education efforts in this target population. The majority of the respondents knew about routes of exposure to lead and basic preventive hygiene measures. Our educational messages should reinforce this knowledge, but also dissipate the incorrect beliefs about protective effects of immunizations, cooking food and boiling water against lead poisoning. In measuring parental attitudes, we have noticed that respondents showed more concern about potential lead poisoning in their family, than when they were asked about lead problem in general terms. For example, only 28% thought that lead poisoning is a big problem in their community, but 62% were very concerned about lead poisoning in their children. This is a useful finding for developing our educational materials and attitudes assessment tools in the future. Only a minority of children had been tested for lead poisoning. Almost none of the interviewed renters recalled being informed about potential lead hazards, particularly in pre-1950 housing, despite a federal law requiring that a landlord or seller notify renters or house buyers about possible lead risks.

The implications of these results are two-fold: we need to learn more about existing knowledge, attitudes and practices about lead poisoning, and then to focus our efforts on raising public awareness and educating the parents, landlords and renters.



Table 3. Practices related to lead poisoning

Practice	%
Children tested for lead poisoning	13.6
Not told of paint containing lead hazards when signing a lease	89.2
Not given a pamphlet on lead when signing a lease	90.6

Domestic and Imported Outbreaks of *Shigella* Reported to Miami Dade-County Health Department Office of Epidemiology and Disease Control

Alicia Camps Sotirescu

Introduction

Shigellosis is an acute, self-limited, intestinal disease caused by the genus *Shigella*. There are four species or serogroups: Group A, *S. dysenteriae*, Group B, *S. flexneri*, Group C, *S. boydii*, and Group D, *S. sonnei*. A small inoculum (10 to 200 organisms) is sufficient to cause infection. Symptoms usually begin 1-3 days after exposure. Transmission is usually directly from person to person or indirectly by flies or contaminated food or water. Most who are infected with *Shigella* develop diarrhea, fever, and stomach cramps starting a day or two after they are exposed to the bacterium although the incubation period may be as long as four days. The diarrhea is often bloody. Shigellosis usually resolves in 5 to 7 days. In some persons, especially young children and the elderly, the diarrhea can be so severe that the patient needs to be hospitalized. A severe infection with high fever may also be associated with seizures in children younger than 2 years old. Some persons who are infected may have no symptoms at all, but may still pass the *Shigella* bacteria to others.

Every year about 240 *Shigella* cases are reported to the Miami-Dade County Health Department Office of Epidemiology and Disease Control (MDCHD OEDC). Every year 18,000 cases are reported in the United States, and worldwide shigellosis results in 600,000 deaths per year.

Cases

On April 16th, September 10th and 19th, 2002, three Miami-Dade County hospitals reported to MDCHD

OEDC *Shigella* cases from three different families. One of the families was visiting Florida from another state. The other two families were Miami residents that visited their native country, Haiti, during the summer time.

Methods

The children's parents were interviewed by telephone to gather information about gastroenteric symptoms, foods consumed, and travel dates in the state of Florida, other states and overseas.

A case was defined as a family member who reported at least two of the following symptoms: diarrhea, fever, abdominal pains, and vomiting. A confirmed case was defined as having the symptoms and a positive stool culture from which *Shigella* were isolated.

Results

Outbreak of Shigellosis related to out-of-state exposure. On April 16th, 2002, a case of Shigellosis was reported to MDCHD OEDC. During parent's interview we found that the case was a six year-old child admitted to the hospital beginning on April 11th with non-bloody diarrhea, fever, loss of appetite and dehydration with stool culture positive for *Shigella* group D. The parent reported an additional 10 family members including 8 children who had non-bloody diarrhea with mucus, fever, abdominal pains and cramping. Thus, eleven of the seventeen (64%) family members who attended the family reunion became ill. None of the ten linked cases received medical care. The family reported that they had a family reunion and they ate home made barbecue chicken, curry goat, rice with peas and cole slaw. Food items were no longer available for testing.



The MDCHD OEDC collected three follow-up stools for culture from each of the nine family members. No *Shigella* or other pathogenic bacteria were isolated from the stool specimens.

First imported outbreak of Shigellosis. On September 10th, OEDC received a report of two cases of *Shigellosis*. During the interview children's parent reported that two siblings had bloody diarrhea with mucus, abdominal pains and cramps, fever, and loss of appetite on August 28th, 2002, in Haiti. After the family returned to Miami, the two children had stool cultures collected on September 3, from which *S. flexneri* serogroup B, and *S. boydii* serogroup C2 were isolated. The parent reported that eighteen family members traveled from Miami to Haiti and fourteen of the eighteen members (77%) had the same gastroenteric symptoms in Haiti. One of the family members reported that they found a lot of flies where they stayed during the visit.

Second imported outbreak of Shigellosis. MDCHD OEDC received a report of a case of *Shigellosis* on September 19th, 2002, in a five year-old boy. The child's parent reported that the family traveled to Haiti in August 30th. On September 4th, a five year-old boy developed bloody diarrhea, abdominal pain, vomiting, and loss of appetite in Haiti. After the family came back to Miami on September 15th, the ill family member was admitted to the hospital and stayed for four days. *Shigella* serogroup B was isolated from the patient's stool culture on September 19th. All other family members (two siblings and the mother) had gastroenteric symptoms. The two siblings had stool cultures but no *Shigella* were isolated. The mother did not have stool culture and was treated with ampicillin in Haiti.

Discussion and Recommendations

Shigellosis is highly contagious because only a small number of organisms are needed to cause illness (10-100). This may explain the high attack rate among families especially among the children. The three families received information about *Shigellosis* disease and the preventive measures.

Measures to prevent *Shigellosis* include:

General Preventive Measures

- ◆ Wash hands with soap and water thoroughly after using the toilet and playing, before preparing foods, beverages and eating.
- ◆ Brush under the fingernails.
- ◆ Supervise children's handwashing.
- ◆ Wash fruits and vegetables properly.

Recommendations for Travelers

- ◆ Do not drink tap water or use tap water for brushing teeth. You may drink boiled, filtered, canned, or bottled water or beverages such as carbonated beverages, beer and wine.
- ◆ Clean and dry the surface of the can or bottled beverage before pouring or drinking.
- ◆ Avoid ice because it may be made from unsafe water.
- ◆ Do not eat salads, uncooked vegetables and fruit, unless the vegetables or fruit can be peeled (e.g. bananas).
- ◆ Do not drink unpasteurized milk or milk products.
- ◆ Do not eat, raw meat or uncooked shellfish.
- ◆ Food that has been cooked and is still hot is generally safe.



Monthly Report

Selected Reportable Diseases/Conditions in Miami-Dade County, December 2002

Diseases/Conditions	2002	2002	2001	2000	1999	1998
	this Month	Year to Date				
AIDS ^{*Provisional}	109	1161	1230	1318	1346	1597
Campylobacteriosis	27	129	127	162	177	114
Chancroid	0	0	0	0	0	2
<i>Chlamydia trachomatis</i>	195	4218	3509	3010	4083	3596
Ciguatera Poisoning	0	2	0	2	0	0
Cryptosporidiosis	3	15	12	33	35	12
Cyclosporiasis	1	2	0	0	0	1
Diphtheria	0	0	0	0	0	0
<i>E. coli</i> , O157:H7	5	5	2	6	9	6
<i>E. coli</i> , Other	0	2	1	1	0	1
Encephalitis	0	1	0	0	0	2
Giardiasis, Acute	34	238	272	241	149	108
Gonorrhea	96	1837	1806	1996	2805	2626
Granuloma Inguinale	0	0	0	0	0	0
<i>Haemophilus influenzae</i> B (invasive)	4	4	2	4	5	1
Hepatitis A	9	142	192	125	115	134
Hepatitis B	16	57	77	132	77	72
HIV ^{*Provisional}	190	1839	1507	1426	1521	1675
Lead Poisoning	50	321	281	394	413	364
Legionnaire's Disease	1	1	3	0	0	1
Leptospirosis	0	0	0	0	1	0
Lyme disease	0	2	7	8	1	0
Lymphogranuloma Venereum	0	0	0	0	0	2
Malaria	4	16	21	25	29	28
Measles	0	0	0	0	0	0
Meningitis (except aseptic)	5	20	26	35	15	9
Meningococcal Disease	4	15	16	31	22	11
Mumps	0	0	0	2	5	0
Pertussis	0	6	3	7	18	13
Polio	0	0	0	0	0	0
Rabies, Animal	0	0	0	0	0	0
Rubella	0	0	0	1	0	0
Salmonellosis	69	375	321	283	373	269
Shigellosis	40	264	153	234	231	255
<i>Streptococcus pneumoniae</i> , Drug Resistant	15	117	171	213	118	50
Syphilis, Infectious	29	229	186	131	83	31
Syphilis, Other	54	925	870	728	739	738
Tetanus	0	0	1	1	0	0
Toxoplasmosis	2	24	19	1	2	0
Tuberculosis ^{*Provisional}	33	239	291	274	264	290
Typhoid Fever	0	4	5	2	16	3
<i>Vibrio cholera</i>	0	1	0	0	0	0
<i>Vibrio</i> , Other	0	0	0	0	0	0

Note: Recently, we have been in transitional processing for our epi surveillance system. So, our monthly report of Selected Reportable Disease/Conditions was impacted, the number of reportable diseases may be lower than real numbers in the past two months (except HIV/AIDS, STD and TB cases). Particularly, Hepatitis A and B had longer transition period. Now, all information is based on Merlin system. Sorry for any inconvenience.

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

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



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January 2003
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