MISSISSIPPI STATE DEPARTMENT OF HEALTH Lead Poisoning Prevention and Healthy Homes Screening Plan





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Mississippi Targeted Lead Screening Plan

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I. Introduction and Purpose

The goal of lead screening is to identify children who have been exposed to lead, provide appropriate interventions and reduce the risk of exposure. If an elevated blood lead level (EBLL) is detected, the nature of care and the frequency of follow-up testing vary with the patient's age and the blood lead level (BLL). Whatever the age, people with EBLLs (or their parents) should be educated about lead poisoning and what they can do. The single most important factor in managing childhood lead poisoning is identifying and reducing the child's exposure to lead.

The Mississippi Lead Poisoning Prevention and Healthy Homes **Screening Plan** was developed to support the efforts of the United States Department of Health and Human Services (Healthy People 2020) to reduce blood lead levels in children.

II. Background

Lead is an element and occurs naturally, but blood lead concentrations measured in micrograms per deciliter (μ g/dL) are quite low in the absence of industrial activities. In the United States, there were historically two major sources of industrially derived lead for children: airborne lead, mostly from the combustion of gasoline containing tetraethyl lead; and leaded chips and dust, mostly from deteriorating lead paint. Both contribute to soil lead. A steep decrease in exposure to airborne lead in the United States has occurred since 1980. Federal legislation in the 1970s removed lead from gasoline and decreased smokestack emissions from smelters and other sources, causing blood lead concentrations in children to decrease.⁽¹⁾ In the 1970's the US Consumer Product Safety Commission ruled paint for homes could contain no more than .06% lead by dry weight which is a significant decrease from 50% lead prior to the 1950's.

According to the Centers for Disease Control and Prevention (CDC), at least 4 million households have children living in them that are being exposed to high levels of lead. There are approximately half a million U.S. children age 1-5 with blood lead levels above 5 micrograms per deciliter (μ g/dL), the reference level at which the CDC recommends public health actions be initiated.

No safe blood lead level in children has been identified. Lead exposure can affect nearly every system in the body. Lead poisoning can cause learning disabilities, behavioral problems, and, at very high levels, seizures, coma, and even death. If a child is exposed to neurotoxins such as lead, the resulting loss of intelligence or behavioral problems can be irreversible. Because lead poisoning often occurs with no obvious symptoms, it frequently goes unrecognized. The only way to diagnose lead poisoning is via blood lead levels. Many studies point to a link between BLLs $\geq 5 \,\mu g/dL$ and harmful health effects, in particular learning disabilities and behavior problems. Although concentrations have decreased in all children, some disadvantaged children continue to have higher blood lead concentrations. Airborne lead should no longer be a source of community exposure in the United States, but individual counties sometimes still exceed airborne lead regulations, and continued vigilance is warranted. Individual children may still be exposed to airborne lead in fumes or respirable dust resulting from sanding or heating old paint, burning or melting automobile batteries, or melting lead for use in a hobby or craft. ⁽¹⁾

Because there is no apparent threshold below which adverse effects of lead do not occur, EBLL must be defined arbitrarily. This document uses the 2012 CDC definition that defines a reference level of $5\mu/dL$ to identify children with blood lead levels that are much higher than most children's levels. This reference value is based on the 97.5th percentile of the National Health and Nutrition Examination Survey (NHANE) blood lead distribution in children. Although the BLL at which particular elements of care coordination will be initiated is variable, education and follow-up BLL monitoring should be available for any child who has a confirmed BLL $\geq 5 \mu g/dL$. Home visit and environmental investigation is available to any child with a venous BLL $\geq 15 \mu g/dL$. Because lead exposure might change with a child's developmental progress (e.g., walking or reaching window sills) or as a result of external factors (e.g., family relocation or home remodeling), two routine screenings are recommended (at approximately ages 1 and 2 years). ⁽²⁾

III. Risk Factors

The program defines populations at high-risk for EBLLs as Medicaid-enrolled or Medicaid-eligible children, children whose parents answer "yes" or "don't know" to questions on the CDC risk questionnaire, pregnant women, and children over age six with lead elevations ($\geq 15 \ \mu g/dL$) requiring medical management. Blood lead screening is required under Medicaid's Cool Kids Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program. Even though tests are a federally required component of EPSDT visits, the testing rate is low even for EPSDT eligible children. According to the Mississippi Lead Poisoning Prevention and Healthy Homes Program and the Mississippi Division of Medicaid, from 2010-2015 there were 1,176,054 Medicaid-eligible children in the state but only 15% were screened for lead poisoning.

Sources and Pathways of Lead Exposure in Children

The source of most lead poisoning in children is dust and chips from deteriorating lead paint on interior and exterior surfaces. Children who developed lead encephalopathy with blood lead concentrations more than 100 μ g/dL often had chips of lead paint visible on abdominal plain films. Children who live in homes with deteriorating lead paint, however, can achieve blood lead concentrations of $\geq 20 \mu$ g/dL without frank pica. Lead based paint was no longer used on interior surfaces in the United States by the mid-1970s. However, in 1998, of the 16.4 million US homes with one or more children younger than 6 years, 25% still had significant amounts of lead-contaminated deteriorated paint, dust, or adjacent bare soil ("lead hazard"). Dust and soil are also a final resting place for airborne lead from gasoline and dust from paint. Lead in dust and soil can recontaminate cleaned houses and contribute to elevating blood lead concentrations in children who play on bare, contaminated soil. ⁽¹⁾

Lead Based Paint A common source of high-dose lead exposure to young children is deteriorated paint found in older homes. Lead paint is found most commonly in pre-1950 homes. ⁽³⁾

Soil and house dust Dust contaminated by deteriorated paint, leaded gasoline and industry emissions may contain high



concentrations of lead. Soil containing lead is found near the foundations of homes and near major roads. Contaminated dust is common on floors and windows sills and troughs. ⁽³⁾

Most homes with lead-based paint and the original window components have hazardous levels of lead dust on windowsills and troughs. Homes with exterior lead-based paint often have hazardous levels of lead dust on surfaces near the home, such as porch floors and windowsills, railing caps and outside steps.

Other Potential Exposure Hazards:

Vinyl miniblinds Those manufactured prior to 1997 may contain lead as a stabilizing agent. Exposure to ultra-violet light deteriorates the vinyl, causing lead-contaminated dust to accumulate on the surface of the blinds. Surfaces that have been under or near these blinds, such as windowsills, furniture, toys and carpet, often have hazardous levels of lead dust.

Drinking water Lead pipes or copper plumbing connected with lead solder may contaminate water.

Food Some imported canned foods contain lead, as do foods served from leaded crystal or ceramic dishes with lead-containing glaze.

Air Emissions from active lead smelters and other lead-related industry may be sources of lead contamination.

Occupations and hobbies Workers may bring home lead-contaminated dust on their clothing, or via lead scrap materials. Hobbies such as reloading or casting ammunition, making stained glass, pottery, fishing weights and jewelry are common sources of lead.

Pottery Traditional pottery imported from Mexico or other countries may be improperly glazed, and the glaze used to make the pottery may contain large amounts of lead. Lead can leach out of this type of pottery if it is used to hold or store foods.

Medicines Lead has been found in some traditional (folk) medicines used by Indian, Middle Eastern, West Asian and Hispanic Cultures. Folk medicines can contain herbs, minerals, metals, or animal products. Lead and other heavy metals are put into certain folk medicines because these metals are thought to be useful in treating ailments. Sometimes lead accidentally gets into folk medicine during grinding, coloring, or from the package. Azarcon (also known as Rueda, Coral, Maria Luisa, Alarcon or Liga) and Greta are remedies imported from Mexico that contain 90 to 100 percent lead by weight. Any amount of these products is poisonous to children or adults. Azarcon is a bright orange powder; Greta is a yellow powder. Both are used to treat "Empacho" (intestinal illness). Children who are given these powders are actually ingesting lead, and they may develop the same symptoms that these medicines are intended to treat. Paylooah is a red powder that contains high levels of lead. Paylooah is used by some in the Hmong community to treat rash or fever. Lead has also been found in some Chinese herbal medications.

Cosmetics Another source of lead may be eye cosmetics called Surma or Kohl, which are used by some Indian, African and Middle Eastern immigrants. Lead has also been found in aphrodisiacs imported from India and Africa.

Candy Some candies imported from Mexico have high lead content. Candy contaminated with lead may be due to wrappers printed with lead containing ink, candy ingredients such as lead contaminated chilis, glaze on small clay pots and lead contaminants from pesticides, fertilizers, or dirt.

Toys UNC-Asheville studies demonstrate the presence of both lead and cadmium in soft vinyl children's toys. Studies found that as soft vinyl toys age, through exposure to light and chewing, they release lead and cadmium dust. This was especially true in soft vinyl toys imported from Asia. Highest levels of cadmium were found in toys, soft lunchboxes and rainwear that were bright yellow. Like lead, cadmium is highly toxic to children.



Jewelry Some types of metal jewelry contain high levels of lead. This metal jewelry, attractive to children, is often found in vending machines at cosmetic or costume jewelry counters, and in toy departments.

Keys Car keys, post office box keys, and house keys all have lead in them.

Electrical cords Lead is usually present in the vinyl covering of all electrical cords especially the large orange electrical cords.

IV. Lead Poisoning in Mississippi

Mississippi Specific Screening Results

According to data collected and analyzed by the Mississippi Lead Poisoning Prevention and Healthy Homes Program (MSLPPHHP), 263,541 children were tested for elevated blood lead levels (BLLs) from 2010-2015. Of the total number of children tested, 2,303 had BLLs at or above the reference value of $5\mu g/dL$ and 285 had BLLs $\geq 15 \mu g/dL$. Children tested with BLLs between 5 and 14 $\mu g/dL$ will require ongoing blood lead monitoring and prevention education from health care providers and public health agencies.

Year	Total Children Tested	Children Less Than Six Years Old	Percentage of Children Tested	5-9 µg/dL	10-14 μg/dL	15-19 µg/dL	20-44 µg/dL	45-69 µg/dL	>=70 µg/dL	Grand Total	Percentage of Children with Blood Lead Level >=5 μg/dl Among Children Tested
2010	47,800	242,345	19.72%	481	103	31	30	2	1	648	1,36%
2011	41,549	250,997	16.55%	274	69	32	26	0	0	403	0.97%
2012	42,623	247,761	17.20%	248	76	32	25	2	0	383	0.90%
2013	43,401	240,036	18.08%	223	67	17	20	1	0	328	0.76%
2014	46,101	234,738	19.64%	217	59	13	17	2	0	308	0.67%
2015	42,067	231,834	18.15%	142	57	22	12	0	0	233	0.55%

Source: U.S. Census Bureau, MSLPPHHP STELLAR Database

Areas with Increased Risk

In Mississippi, since current screening data alone has significant limitations, the MSLPPHHP is utilizing a multi-source, risk-based approach to target regions of the state with conditions that historically place children at increased risk. CDC recommends that locally (State) developed targeted risk assessment and blood lead screening strategies be applied at ages 1 and 2 years. ⁽²⁾

While the following sections of this document describe housing conditions that heighten risk in some areas of Mississippi, it should be noted that there is no known safe blood lead level for children. Until substantial data disprove the need, all children (families) statewide should receive a risk based assessment and screening as indicated.

Counties were selected using best-available data and information with known limitations. All clinicians regardless of geographic area of residence or perceived community affluence should carefully evaluate each child's risk. Neither poverty nor environmental risks associated with housing are unique to the targeted counties.

Selected Counties with Increased Risk

In 2016, MSDH identified 23 high risk areas (Adams, Calhoun, Claiborne, Coahoma, Copiah, Harrison, Hinds, Holmes, Humphreys, Issaquena, Jackson, Jefferson Davis, Jones, Lauderdale, Leflore, Pike, Quitman, Sharkey, Sunflower, Warren, Washington, Webster, and Yazoo) for lead poisoning based on a combination of the following factors:

- Higher percentage of pre-1979 housing
- Higher percentage of poverty population
- Higher percentage of children with EBLL from most recent data 2013-2015
- Higher number of children with EBLL from most recent data 2013-2015
- Lower percentage of children tested for lead

Given the significant risk factors associated with poverty and environment (housing), many children throughout the state are at risk for lead poisoning. The fact that some counties with increased risk factors are targeted does not eliminate or even reduce the necessity of diligent risk assessment and screening of children statewide.

Focusing on Risks (Housing)

An estimated 4.1 million homes in the United States have a lead-based paint hazard. Estimates are higher for homes in the Northeast and Midwest and for homes in which young children reside. Despite considerable attention and resources from federal, state, and local agencies and advocacy groups, publicly available funding has not been able to provide sufficient resources to eliminate all lead paint hazards from U.S. homes. ⁽²⁾

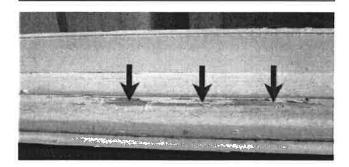
Table 2 illustrates the age of housing stock in Mississippi's targeted counties. The *total* column in Table 2 represents the total number of occupied housing units in each county. The last column in the table represents the percent of total owner and renter occupied units out of the total number of housing units built prior to 1979.

		Housing	Table 2 Stock as a Risk Factor fo	or Lead Pois	oning
	Pre- 1979	Pre- 1979	Pre-1979	Total	
County	Owner	Renter	Total owner + renter	Housing Units	% of total housing units Pre-1979
Adams	5691	3460	9151	12081	75.7
Coahoma	3544	2804	6348	9350	67.9
Harrison	17862	11046	28908	74369	38.9
Hinds	32468	21890	54358	88321	61.5
Holmes	2142	1029	3171	6396	49.6
Humphreys	1113	772	1885	3051	61.8
Jackson	17965	6953	24918	50388	49.5
Jones	8678	3909	12587	24352	51.7
Lauderdale	9997	6460	16457	29662	55.5
Leflore	3993	2949	6942	10891	63.7
Pike	5060	2579	7639	14809	51.6
Sunflower	3256	2151	5407	8451	64.0
Washington	7393	5317	12710	18383	69.1
Yazoo	2569	1818	4387	8552	51.3
Calhoun	2622	1031	3653	5913	61.8
Claiborne	1188	637	1825	3163	57.7
Issaquena	143	110	253	427	59.3
Jefferson Davis	1912	521	2433	4947	49.2
Sharkey	720	502	1222	1798	68.0
Warren	6422	4160	10582	18367	57.6
Quitman	1347	477	1824	3092	59.0
Copiah	3469	1675	5144	10004	51.4
Webster	1467	612	2079	4085	50.9
MS Percent					45.8

Source: 2010-2014 American Community Survey 5-year Estimates

According to the American Community Survey, 2010-2014, there were approximately 1,092,627 occupied housing units in Mississippi. Of this number 501,312 or 46% were constructed earlier than 1979. Housing constructed before 1979 has some potential to have paint, either interior or exterior, that contains significant quantities of lead.

Paint on poorly maintained interior or exterior surfaces in older homes poses an ongoing and significant risk to young children. Outdoor areas adjacent to homes with deteriorating paint where children often play (right) as well as indoor areas such as windows sills that toddlers often mouth or frequently touch (below) increase exposure risk.





V. Lead Screening Process

Assessment of risk (utilizing the MSDH Risk Assessment Questionnaire Appendix B): (1) assess children at risk for lead exposure, (2) administer the questionnaire to children during their well-child visit and on occasions when there are changes in the child's environment or community and (3) provide counseling on lead exposure and healthy homes based on the outcome of the questionnaire.

Screening: Blood lead measurement is the only method of screening. A venous specimen is preferred, although capillary samples are acceptable.

According to current Medicaid guidelines, Medicaid recipients or Medicaid eligible children should be screened routinely at 12 and 24 months and at any time risk factors are identified (see Blood Lead Screening and Healthy Homes Summary, Appendix B). Any child between 6-72 months, whose parent answered "yes or don't know" to any questions on the risk assessment questionnaire, should be screened. Particular attention should be given to children exposed to folk remedies, immigrant children, children who are abused, neglected, and malnourished or who practice pica.

Schedule for BLL screening:

Routinely, at 12 and 24 months (12 months between samples).

- At any time between 36-72 months if not previously screened.
- At anytime between age 6-72 months if risk assessment indicates possible exposure.
- Annually (6-72 months) with risk factors or/and BLL \geq 5 µg/dL.
- Anytime when medically indicated in work-up of some unexplained illnesses

(example: severe anemia, seizures, lethargy, abdominal pain).

VI. State of Mississippi Reporting Requirements

Lead Poisoning is considered a Class 2 and Class 3 reportable disease.

MSDH and the Division of Medicaid require reporting of all venous blood lead levels $\geq 5 \ \mu g/dL$ to the Mississippi Lead Poisoning Prevention and Healthy Homes Program (MSLPPHHP) at MSDH Central Office (601-576-7447) within one week of diagnosis (Class 2). Laboratories should report all blood lead test results within one week of completion (Class 3). For venous BLLs $\geq 15 \ \mu g/dL$, the MSLPPHHP Manager will coordinate the investigation with the environmentalist.

Medicaid Cool Kids (EPSDT)

The Centers for Medicare and Medicaid Services (CMS) mandates lead testing of Medicaid children. BLLs are done at 12 and 24 months. All children 24-72 months who have not previously been tested must also receive a blood lead test. There is no waiver to this requirement at this time. Mississippi Medicaid follows CMS as well as the CDC's recommendations. Lead testing of Medicaid children is a mandatory screening component of the Cool Kids (EPSDT) preventive health program. Mississippi Medicaid partners with the MSLPPHHP to set lead testing guidelines, enforce lead testing policy, conduct care coordination and follow-up, and provide outreach and education activities statewide to high risk populations.

Providers that utilize an in-house lead analyzer must follow standard laboratory reporting requirements and report all lead results to the Mississippi State Department of Health (MSDH) Lead Poisoning Prevention and Healthy Homes Program at 601-576-7447. For more information visit the MSDH website at <u>www.msdh.state.ms.us</u>.

Procedure for Reporting

The information listed below is required for lead surveillance and to ensure an environmental assessment is done. The information can be transmitted in any of the two ways:

- 1. Complete a *Reportable Disease and Conditions Card*, Form #135 (Appendix B) and mail it to the address given.
- 2. Call the Lead Poisoning Prevention and Healthy Homes Program 601-576-7447 or Fax: 601-576-7498

Required Data:

Patient's name* Address (including zip code)* Date of birth* Phone number* Type of specimen (venous or capillary)* Date of test* Results (µg/dL)* Social Security number Medicaid number Parent/guardian name*



Private insurance Name of clinic where specimen was drawn* Clinic address Clinic phone number* Clinic contact person for lead screening

All information is critical to statewide data collection, but items with an asterisk (*) are crucial to entering the child into the database and arranging for an environmental assessment.

VII. References

- 1. American Academy of Pediatrics Committee on Environmental Health. Lead Exposure in Children: Prevention, Detection and Management. Pediatrics 2005; 116:1036-46.
- Centers for Disease Control and Prevention: Interpreting and Managing Blood Lead Levels

 <10 μg/dL in Children and Reducing Childhood Exposures to Lead: Recommendations of CDC's Advisory Committee on Childhood Lead Poisoning Prevention. MMWR
 Recommendations and Reports November 2, 2007/56 (RR08);1-14;16. Available at:
 <u>http://www.cdc.gov/MMWR/preview/mmwrhtml/rr5608a1.htm.</u>
 Accessed August 25, 2016.
- Centers for Disease Control and Prevention. (March 2002) Managing Elevated Blood Lead Levels Among Young Children: Recommendations From the Advisory Committee on Childhood Lead Poisoning Prevention. Atlanta, GA: Centers for Disease Control and Prevention; 2002. Available at <u>http://www.cdc.gov/nceh/lead/casemanagement/managingEBLLs.pdf</u>. Accessed September 6, 2016.
- 4. National Research Council and Institute of Medicine (2000) From Neurons to Neighborhoods: The Science of Early Childhood Development. Committee on Integrating the Science of Early Childhood Development. Jack P. Shonkoff and Deborah A. Phillips, eds. Board on Children, Youth and Families, Commission on Behavioral and Social Sciences and Education. Washington, D.C.: National Academy Press.
- Centers for Disease Control and Prevention. Preventing Lead Poisoning in Young Children. Atlanta: CDC; 2005. <u>http://www.cdc.gov/nceh/lead/publications/PrevLeadPoisoning.pdf</u>. Accessed September 6, 2016.
- Centers for Disease Control and Prevention. Preventing Lead Exposure in Young Children: A Housing-Based Approach to Primary Prevention of Lead Poisoning. Atlanta: CDC; 2004. <u>http://www.cdc.gov/nceh/lead/publications/Primary%20Prevention%20Document.pdf</u>. Accessed September 6, 2016.
- U.S. Census Bureau, 2010-2014 American Community Survey 5-Year Estimates. Available at: <u>http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF</u> Retrieved September 15, 2016.

Appendix A

Guidelines for Questions to Ask Regarding a Child's Environmental History

Paint and soil exposure

- What is the age and general condition of the residence?
- Is there evidence of chewed or peeling paint on woodwork, furniture, or toys?
- How long has the family lived at that residence?
- Have there been recent renovations or repairs in the house?
- Are there other sites where the child spends significant amounts of time?
- What is the character of indoor play areas?
- Do outdoor play areas contain bare soil that may be contaminated?
- How does the family attempt to control dust/dirt?

Relevant behavioral characteristics of the child

- To what degree does the child exhibit hand-to-mouth activity?
- Does the child exhibit pica?
- Are the child's hands washed before meals and snacks?

Exposures to and behaviors of household members

- What are the occupations of adult household members?
- What are the hobbies of household members? (Fishing, working with ceramics or stained glass, and hunting are examples of hobbies that involve risk for lead exposure.)
- Are painted materials or unusual materials burned in household fireplaces?

Miscellaneous questions

- Does the home contain vinyl mini-blinds made overseas and purchased before 1997?
- Does the child receive or have access to imported food, cosmetics, or folk remedies?
- Is food prepared or stored in imported pottery or metal vessels?

http://www.cdc.gov/nceh/lead/casemanagement/managingEBLLs.pdf

Blood Lead Screening and Mealthy Homes Summary

Screen all children between the ages of 6 and 72 woords at each welt-child visit using the Risk Assessment and Heulthy Howers Questionnate below. **Pisk Assessment and Healthy Homes Questionnaire** — "Consider the child high risk with a "yes" or "don't have" answer to guestions 1–7. Questions 8–11 pertorn to Healthy Housing issues and will help determine if there are hazade inside the child's house that may effect his/her health.

		Date	2ªC	Daules	Ihale	Date	Date	Dutt	Dake	Dake	Date
		Yes N	Yes No Yes No	Yee No	Yee No	Yes No	Yes No	Ves No	Yee No Yes No	Ves No	An and
 Does your child have in us visit 	visit a home, daycare, or other building built before 1950?	19502				+-			+		+
 Does your child spend at least built before 1978 with recent, a 	Dees your child spend at least aix hours a week at a heate, daycare, or other building built before 1978 with recent, ongoing or pleaned renovabiling?	ikting									-
 Does your child have a family lead level? 	nity member or friend who has or did lave an elevated blood	d blood									+
 Does your child frequently Examples: construction, w 	Does your chaid frequently ucme in cortast with as adult who works with lead? Examples: conseruction, welding, painting, radiator repair, arctal reycling									-	1
 Have you seen your child a door frames), keys, electric outside near the home? 	Have you seen your child monthing or rouching painted aurfares (i.e. window sills, door frames), keys, electrical cards, jeweby, vinyl (plastic) mini-blinds or bare see outside near the homo?	il la, Mont								-	
 Do you give your child any Examplear Greis or Azaroo modicines (India)? 	Do yow give your child any leader or folk remedies which may constain lead? Examples: Grets or Azarcon (Hilspanic), pay-boosh (SE Asta), and symrecia: modoines (India)?										
7. Dues your child drink well water?	1 PH RIPELS				_						+
8. Does your house have a specific	whe starm?					-	+				t
Does your home have a carbon	rbow monoxide detector?						+				+
10. Are there signs of water h:	Are there signs of wates leakage in your house (model and mildow)?							ł			+
 Hist your child been disgnoord 	oecd with asthink by a permary care provider?										
Blood Leed Levele				-							
	Date and Signature Level	Particular State		•	Dates and Initial	Initial		S In a	Com	Comments	
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Appendix B

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Nombre de Niño	Fecha de Nacimiento	Fecha	Fecha	_	Fecha		Fecha	Fecha	_	Fecha		Fecha		Fecha	Fecha	_	Fecha
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¿Su niño vive o visita una casa, guardería, u otro edificio construido antes de 1950?	ates de 1950?	\vdash			-				+	-	-	-				+	┢
.5 N main pars por lo imenos sex horas par semant en mas cuas, guarderia, a caro cânfica concrutado zune, de 1978 al que le estes haccendo remodelscrones, remodelado recientempante o estên planeando remodelindo?	र 1978 धी गुभन् । ले								-	-	-	-				-	-
¿Tiene su miño un miembro de su familia o una amistad quien tiene o tuvo miveles de plomo elevados en la sangre?	o niveles de			1	-				-	-	_	-			1	+	-
4. ¿Esta su mino frecuentemente en contacto con un adulto que trabaja con plomo? Ejemplos: construcción, soldadura, puntando, reparación de radiadores, reciclando metal?	lomo?					<u> </u>											<u> </u>
¿Ha visto usted a su mino poner la bora o tocar superficies pintadas (marcos de ventanas, marcos de puertas). Ilaves, cordones eléctricos, joyeria, vinilo (plástico), mini persianas o en la tierra añoera de su casa?	uarcos de (plástico),											-					
¿Le da usted a su niño algun remedio casero que pueda contener plomo? Ejemplos: Greta o Azarcón (Hispano), pay-loo-ah (Asia SE), y medicinas																	
r Toma su mito agua de un pozo?		+	1	t	+			t	+	+	+	+			1	+	+
¿Tiene su casa detector de humo?		+		┢					╈	╀	+	-			1	+	╀
¿Thene su casa un detector de monoxido de carbón?		┝		+	-			T	+	┢	┢	-			T		┢
 ¿Hay señales de infiltraciones de agua en su casa (moho)? 		\vdash		\vdash	\vdash			T	\vdash	┝	-				T	┢	┝
 ¿Ha sido su miño diagnosticado con asma por su proveedor de cuidados de salud primario? 	de salud																-
Niveles de Plomo en la Sangre									1	+]		1	-
Fecha y Firma	Nivel	No. 12				Ł	chae	Fecha e Iniciales	Sol			3		Comentarios	- Lan	8	
Mutestra inicial extraída- Especifique cap o venoso	Educación sobre el plomo	obre el p	lomo				-										
Extracción confirmationa de nuestra venosa	Consejeria Nutricional	Nutricio	lai														
Extracción repetida de unestra venosa	Prevención de los Riesgos del Plomo	le los Rú	sogs		1						_						
Extracción repetida de nurstra venosa	Visita al Hogar por Asistencia / Trabajo Social	por Asiške	8						-		_						1
Extracción repebida de muestra venosa	Referido al Ambientalista	sta							-		-						
Extracción repetida de unestra venosa	Inspección medioamhiental	Qambiental							-		<u> </u>			C			
Extracción repebida de unestra venosa	Referido para Manejo Clínico	a Manejo					-	1	-		-		ľ.				
Extracción repetida de nuestra renosa	Referido para evaluación del	evaluaca	ón del	1)						

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Appendix C

Please do NOT email t	he Case Report Card PRINT
Reportable Disease	es and Conditions
Disease or Condition:	Date of Onset:
Method of Diagnosis: Clinical and/or Laboratory	Specific Name of Test:
Specimen (Bl	ood, CSF, sputum, stool, etc.):
If hospitalized, chart number:	Date Laboratory Specimen Obtained:
Name of Patient:	Occupation:
Address: Phone (Home):	Phone (Work):
City: Zip:	County:
Date of Birth: Current Age: Sex: R	Hispanic Origin: Yes
Is patient a food handler? Yes No	Child/worker in daycare? Yes No
Person Reporting:	Attending Physician:
Name of Hospital, Clinic/Etc.	Phone: ()
Phone: ()	Date of Report:
Disease or Condition Specific Information (Complete if Appro,	priate)
If Hepatitis: Hepatitis A IgM antibody: Positive Negative Not Done	
Hepatitis B IgM antibody: Positive Negative Not Done	
Hepatitis C antibody: Positive Negative Not Done	Sputum
Was patient jaundiced? Yes No	Date: Smear Culture Tissue Date: Smear Culture
Is patient pregnant? Yes No	Body Fluid Date: Smear Culture
If yes: EDC or Delivery Date	
Chemistry Results (Normal Range for Test) Total Bilirubin:	Chest X-Ray Date: CT Date: Normal Abnormal Cavitary Non-cavitary Non-cavitary Non-cavitary
If gonorrhea, chlamydia, or syphilis (including congenital), provi	de the following treatment information:
Date treated:	
Medication: Dosage: _	Route: PO IM IV
Frequency: Duration:	
Individual case reports of influenz	
Mississippi State Department of Health Revis	ed 8-17-12 Form 135E

Appendix D

Lead Fact Sheet

Mississippi Department of Health

What is lead?

Lead is found in:

Tap water (especially well water)	Pottery/ceramic ware	Lead-based paint
C Keys/Key chains	Porcelain tubs and sinks	Soil and dust
Brass faucets	Electrical cords	Batteries
Toy jewelry	Paint on toys	Imported canned foods
Zipper pulls and snap closures	Imported/vinyl/plastic	
	mini-blinds bought before 1997	

Protect your child from lead:

- Clean your child's hands with soap and water or baby wipes after they play outside, and before meals.
- Keep your child from eating paint chips, dust or dirt. Keep children from touching window troughs (wells) in old homes and outside surfaces (steps and porch floors) near old homes. Use a wet mop or wet cloth with an all-purpose cleaner to clear areas of dust or paint chips on window sills, interior floors, porch floors, ledges and outside steps. Keep children's hands and toys off these areas. Window sills that are not very smooth might be hard to clean and can be covered with contact paper or plastic. Surfaces that children touch often should be smooth and easily cleaned. Keep children from eating while sitting on floors or steps.
- Anyone in the household, who works with lead, should avoid wearing work shoes while walking on steps and floors where children put their hands and should avoid wearing work clothes while sitting on furniture or car seats where children put their hands.
- Wash your child's toys often.
- Give your child a diet rich in vitamin C, calcium and iron. Some good sources are milk, oranges, tomatoes, green leafy vegetables, egss, bread, cereal and meat. Since children absorb more lead on an empty stomach give your child something to eat every 2-3 hours.
- Have your home checked for lead before you remodel. Do not scrape or sand lead-based paint.

Signs or symptoms of possible lead poisoning

Most children do not have any obvious signs or abnormal symptoms. Signs of damage sometimes show later. Some signs and symptoms include:

Irritability	Hyperactivity
G Frequent tiredness	Decreased appetite
Behavioral problems	Developmental delay
Stunted growth	Hearing loss

Learning problems

Convulsions, coma, and death can occur at very high lead levels, which are extremely rare.

Is your child at risk for lead poisoning?

- Does your child live in, or regularly visit, an old house built before 1960?
 Was your child's day-care center/pre-school/baby-sitter's home built before 1960?
 Does the house have peeling or chipping paint?
- □ Does your child live in a house built before 1960 with recent, ongoing, or planned renovation or remodeling?
- Has any siblings or playmate of your child had lead poisoning?
- Does your child frequently come in contact with an adult who works with lead? Examples of job descriptions or locations include: construction and painting of buildings and houses; pottery and painting; car and truck radiator repairs, auto body work; the manufacture or working with cable, wire and tire weights; working at a recycling center; welding and soldering; target shooting and handling of firearms, bullets or explosives; electronic repair; furniture refinishing; construction and repair of ships, bridges, and water towers; working on oil rigs; working with rubber or plastics; or working with lead Babbitt.
- Do you give your child any home or folk remedies or Mexican candy which might contain lead?
- Does your child live near a heavily traveled highway or street?
- Does your child play with keys? They may contain lead.
- □ Are there lead fishing sinkers in your home?
- □ Have items other than vegetation been burned outside near the home? The ashes left behind often contain lead.

If you answered "yes" to any of the questions above, please discuss the possibility of lead poisoning with your child's physician or a nurse at your local health department.

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07/02/07

Catalog # 5307

Hoja de Datos Acerca del Plomo

Departamento de Salud del Estado de Mississippi

¿Qué es el plomo?

El plomo se encuentra en

- □ Agua (especialmente de pozo)
- Llaves/Llaveros
- □ Llaves de agua de latón
- 🗆 Joyeria de juguete
- Tiradores de cremalleras y cierres de presión
- Cerámica/artículos de cerámica
 Bañeras y lavabos de porcelana
- Cables eléctricos
- Pintura en juguetes
- Persianas pequeñas importadas de vinito, plástico compradas antes de 1997
- Pintura a base de plomo
- 🗆 Tierra y polvo
- □ Baterías
- Alimentos enlatados importados

Proteja a su niño del plomo:

- □ Limpie las manos de su niño con jabón y agua o toallitas para bebé húmedos (*wipes*) después de jugar afuera y antes de cada comida.
- Evite que su niño coma pedazos de pintura, polvo o tierra. Evite que los niños toquen las partes bajas de las ventanas en casas viejas y las superficies exteriores (peldaños y los pisos del corredor o terraza) cercanos a casa viejas. Use un trapeador mojado o un trapo o paño humedecido con un limpiador para todo uso para limpiar las áreas que tengan restos de pintura o polvo en los marcos de las ventanas, pisos interiores, pisos del corredor, bordes y escaleras exteriores. Mantenga las manos de los niños y los juguetes fuera de estas áreas. El lumbral de las ventanas que no son muy lisas puede ser difícil de limpiar y pueden ser cubiertas con papel o plástico. Las superficies que los niños tocan frecuentemente deben ser suaves o lisas y fáciles de limpiar. Evite que los niños coman sentados en el piso o las gradas.
- Si alguien en la casa trabaja con plomo, deberá evadir zapatos de trabajo al caminar en gradas y pisos donde los niños ponen sus manos and deberían evitar usar ropas de trabajo cuando se sientan en los muebles o asientos de los carros donde los niños ponen sus manos.
- Lave los juguetes de sus niños frecuentemente.
- Dele a su niño una dieta rica en vitamina C, calcio y hierro. Algunas buenas fuentes son leche, naranjas, tomates, vegetales de hojas verdes, huevos, pan, cereal y carne. Ya que los niños absorben más plomo con el estómago vacio dele a su niño algo de comer cada 2 - 3 horas.
- Haga inspeccionar su casa por plomo antes que usted remodele. No raspe ni lije pinturas con base de plomo.

Señales o síntomas de posible envenenamiento con plomo

Algunos niños no muestran señales o síntomas anormales. Señales o daño algunas veces se muestran más tarde. Algunas señales o síntomas incluyen:

🗆 Irritabilidad

- Cansancio frecuente
- Problemas de comportamiento
- Problemas de crecimiento
- 🗆 Problemas de aprendizaje

□ Hiperactividad

- D Pérdida del apetito
- □ Retraso del desarrollo
- Pérdida de audición

Convulsiones, coma y muerte pueden ocurrir en niveles de plomo muy alto que son extremadamente raros.

¿Está su niño en riesgo de envenenamiento por plomo?

- ¿Vive su niño(a) o visita regularmente una casa vieja que fué construida antes de 1960?
 ¿Estuvo su niño en una guarderia /centro pre-escolar/ casa de la niñera construida antes de 1960?
 - ¿La pintura de su casa se está pelando o descascarando?
- □ ¿Le da a su niño algún remedio casero o popular o dulce Mexicano que pueda contener plomo?
- ¿Vive su niño cerca de una calle o una autopista con tráfico pesado?
- □ ¿Juega su niño con llaves? Estas pueden contener plomo?
- □ ¿Hay plomadas de pesca en su casa?
- □ ¿Ha quemado más que solo vegetación fuera o cerca de su casa? Las cenizas que se quedan a menudo contienen plomo?

Si su respuesta es "sí" a alguna de las preguntas de arriba, por favor discuta la posibilidad de envenenamiento a causa de plomo con el médico de su hijo/a o enfermera en su departamento de salud local.



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THE TRUTH ABOUT LEAD POISONING!



MYTH VS FACT



1. There is no way to prevent lead poisoning.	1 Lead poisoning is the nation's #1 preventable environmental health problem facing children today
2. Lead poisoning occurs only when a child lives in a house or apartment built before 1978.	 While lead based paint is one of the major ways to become lead poisoned, there are many other sources, such as certain home remedies, lead crystal and lead contaminated soil.
3. Children must cat paint chips in order to get lead poisoning.	3. Children are more frequently poisoned by the ingestion of dust from lead-based paint than by eating paint chips.
4. Only children in the inner city are in danger of getting lead poisoned.	 Lead poisoning crosses all racial, geographic, and socioeconomic lines.
5. Children will not be harmed by lead unless they have very high lead levels.	 Very low levels of lead in a child's blood can create long-term problems such as learning and behavior problems.
6. Inadequate parental supervision is to blame for the lead poisoning of children.	6. Lead contamination in the environment is the cause of lead poisoning.
 As long as children are kept away from lead paint, they cannot be poisoned by lead. 	 There are many other potential sources of lead exposure such as tap water flowing through lead pipes, keys, mini blinds, toy jewelry, electrical cords, zipper pulls and snap closures.
 There is no need for a blood test because a routine check up can determine if my child has been exposed to lead. 	 The only way to tell if a child has been lead poisoned is by a blood test.
 There are no risk indicators for children who should be tested for lead poisoning. 	9. Enrollment in Medicaid and other federal income-based programs such as WIC and Head Start, living in a pre-1950's house, and having a family member who works with lead are reliable predictors of risk. There is a short risk assessment questionnaire that health care providers can use to make decisions about blood lead testing.

For more information contact the Mississippi State Department of Health's Childhood Lead Poisoning Prevention Program (CLPPP) at 601-576-7447.



Catalog # 5326

LA VERDAD ACERCA EL ENVENAMIENTO CON PLOMO!



MITO VS. REALIDAD



 No hay manera de prevenir el envenenamiento por plomo. 	1. El envenenamiento por plomo es el principal problema de salud ambiental entre los niños que puede ser prevenido.
2. El envenenamiento por plomo se produce sólo cuando un niño vive en una casa o apartamento construido antes de 1978.	2. Mientras que la pintura a base de plomo es una de las principales maneras del envenenamiento con plomo, hay muchas otras fuentes, tales como ciertos remedios caseros, cristal de plomo y suelos contaminados.
3. Los niños se pueden envenenar con plomo solamente si se comen pedazos de pintura.	3. El envenenamiento por plomo en los niños ocurre más frecuentemente por la ingestión de polvo de pintura a base de plomo que por ingestión de partículas de pintura.
 Los niños en las zonas urbanas corren un mayor riesgo de envenenamiento con plomo. 	4. El envenenamiento por plomo cruza todas las líneas raciales, geográficas y socioeconómicas.
5. El plomo no es dañino para los niños a menos que tengan niveles de plomo muy altos.	5. Niveles muy bajos de plomo en la sangre en un niño pueden causar problemas a largo plazo como problemas de aprendizaje y de conducta.
6. La intoxicación por plomo en los niños se debe a la inadecuada supervisión por parte de los padres	6. La contaminación por plomo en el medio ambiente es la causa de la intoxicación por plomo.
7. Los niños pueden evitar el envenenamiento por plomo solamente si no entran en contacto con pinturas que contengan plomo.	7. Hay muchas otras posibles fuentes de exposición al plomo, como el agua del grifo que fluye a través de tuberías de plomo, llaves, mini persianas, joyas de juguete, cables eléctricos, cremalleras y cierres de presión.
8. No hay necesidad de hacer un análisis de sangre por que un chequeo regular puede determinar si un niño ha estado expuesto al plomo.	8. La única manera de saber si un niño se ha envenenado con plomo es por medio un análisis de sangre.
 No hay indicadores de riesgo para los niños que deben ser examinar por envenenamiento con plomo. 	9. Estar inscrito a Medicaid y otros programas basados en los ingresos federales, tales como WIC y <i>Head Start</i> , vivir en una casa que haya sido construida antes de 1950, y tener un miembro de la familia que trabaje con plomo son indicadores fiables de riesgo. Hay un corto cuestionario de evaluación de riesgo que los proveedores de servicios pueden utilizar para tomar decisiones acerca de la prueba de plomo en la sangre

Para más información contacte con el Departamento de Salud del Estado de Mississippi Programa de Prevención del Envenenamiento por Plomo y Hogares saludables (MSLPPHHP) al 601-576-7447.

Creating a Safe and Healthy Home Checklist

Everyone should have a safe and healthy home environment. The checklist below is a tool for creating and maintaining a healthy home environment and shows some key action steps to take in each room of the home.

Family Room

- \Box Keep room clean from dust
- □ Keep floors vacuumed
- $\hfill\square$ Install smoke and carbon monoxide alarms with working batteries
- □ Keep floors clear of electrical cords and clutter
- \Box Do not smoke or allow smoking in the home
- □ Keep plug protectors inserted in unused electrical outlets

Kitchen

- \Box Check for water leaks under sink
- $\hfill\square$ Keep pot handles on the stove turned inward facing the back burner
- \square Keep cleaning supplies stored separately from food and out of children's reach
- \Box Keep appliance cords away from the sink and stove
- □ Keep sharp objects out of reach of children or in a cabinet with a safety latch
- □ Use baits, such as gel, and traps as a way to remove pests like cock-roaches, mice, and rats from a home instead of using pesticides

Adult Bedroom

- □ Keep medication stored in locked drawers or cabinets
- □ Install smoke and carbon monoxide detectors in the hallway outside the bedroom with working batteries
- □ Keep bed coverings and sheets washed on a regular basis in hot water
- □ Keep rooms free of chipped paint and dust
- □ Keep fire sources, such as portable heaters, away from the bed and other flammable materials

Nursery/Child Bedroom

- □ Use a safety approved crib and mattress covered by a fitted sheet
- □ Place baby on his/her back to sleep
- □ Make sure the crib, playpen, or bed is not near the window
- □ Keep toys, soft objects and loose bedding out of the baby's sleep area
- □ Keep rooms free of chipped paint and dust
- □ Keep plug protectors inserted in unused electrical outlets
- □ Keep cords from blinds and shades out of reach of children or use cordless blinds and shades
- □ Keep room clean from dust
- □ Keep floors vacuumed

Bathroom

- □ Bathtubs and showers should have a non-skid bathmat on the tub/shower floor
- □ Use mats with non-slip rubber backs on bathroom floors
- □ Install grab bars next to the bathtub and shower
- □ Clean up moisture and mold safely
- □ Keep prescriptions and over-the-counter medications locked away from children and use childproof caps
- □ Keep small electrical appliances, such as hair dryers, curling irons, or shavers, away from water in sinks or tubs
- □ Supervise infants and children while bathing

Utility and Laundry Areas

- □ Set hot water heater at 120°F to prevent burns
- □ Change furnace filter regularly
- □ Have gas appliances and furnaces checked yearly to make sure they do not release extra carbon monoxide
- □ Make sure the clothes dryer vents outside
- □ Test for radon, if there's a high level, hire a specialist to eliminate the hazard

Outer Part of House and Yard

- □ Fix holes, cracks, and leaks on exterior of the house
- □ Keep trash can covered with a lid
- □ Keep small bodies of water from accumulating outside
- □ Keep paint and tools stored safely in garage or storage room
- Keep all products in original containers; never place kerosene, anti-freeze, paints or solvents in utensils customarily used for food or drinks
- Install handrails on both sides of the stairs
- □ Attach non-slip rubber stair treads on stairs to reduce falls
- □ Maintain gutters, downspouts, and roof to prevent moisture from entering the home
- □ Seal gaps around roofing and attic opening to keep rodents and insects out
- □ Be prepared for an emergency: have a first aid kit and 3 day supply of food
- □ Plan a fire escape route

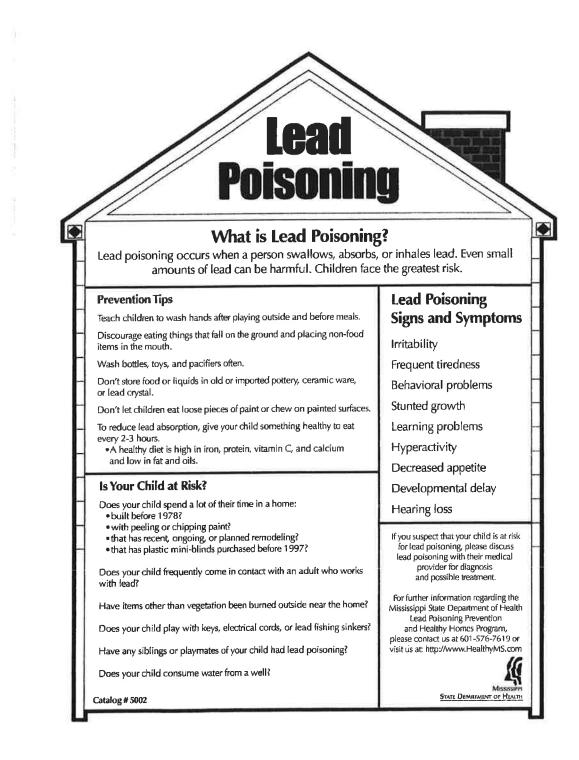


Resource:

The Surgeon General's Call to Action to Promote Healthy Homes (2009) A Healthy Home Checklist Retrieved on February 15, 2011, from the Office of the Surgeon General: <u>www.surgeneral.gov/topic/healthyhomes/index.html</u>

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Appendix G



Healthy Home Tips

What is a Healthy Home?

A Healthy Home is designed and maintained to support the health of its residents. Follow the 7 Principles of a Healthy Home below to keep your family healthy and safe!

Keep It Dry

Check your plumbing, roof, and drainage system for leaks to avoid mold and mildew.

Keep It Clean

Remove dust and clutter to reduce allergens.

Keep It Ventilated

Supply fresh air to reduce chemicals in the home. Open windows or use exhaust fans while bathing or cooking to reduce moisture.

Keep It Pest-Free

Seal cracks and openings to prevent insects and rodents from entering your home.

Keep It Safe

To prevent injuries install items such as smoke and carbon monoxide detectors, fire extinguishers, cabinet locks, and electrical outlet covers.

Keep It Contaminant-Free

Reduce the exposure to lead, tobacco smoke, and other contaminants in your home.

Keep It Maintained

Inspect, clean, and repair your home routinely.

What is Green Cleaning?

Green Cleaning is a way to use safer products to reduce contaminants in your home. Try some of our Green Cleaning recipes below:

Air Freshener

Place a few slices of a citrus fruit, cloves, or cinnamon in a pot with enough water to simmer gently for 1 to 2 hours.

Furniture Polish

Dissolve 1 teaspoon of lemon oil in 1 cup of vegetable oil. Apply with a clean, dry cloth.

Disinfectant

Mix a 1/2 cup of borax into 1 gallon of hot water and clean with this solution.

Floor Cleaner with Fragrant Herbs

Combine in a bucket: 1/8 cup liquid soap or detergent, 1/4 to 1/2 cup of white distilled vinegar or lemon juice, 1/2 cup fragrant herbal tea (peppermint adds antibacterial qualities). Swirl the water around until it is sudsy. Scrub floor with mop.

Before using any of these recipes, test them on an inconspicuous area.

For more tips and recipes on green cleaning, visit our website at http://www.HealthyMS.com

For further information regarding the Mississippi State Department of Health Lead Poisoning Prevention and Healthy Homes Program, please contact us at 601-576-7619 or visit us at: http://www.HealthyMS.com



Catalog # 5002