



TX CLPPP News

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Venous Specimen or Capillary Specimen?

Why We HAVE to Know!!

Of all blood lead reports submitted to TX CLPPP in 2004, over 55,000 (14% of all reports) did not indicate whether the specimen was drawn from a venous or a capillary site. Omission of this information has several repercussions, the most serious of which is that it can prevent an environmental investigation from being performed at the home (or other frequented location) of a child with an elevated blood lead level.

The most critical follow-up step in managing a lead poisoned child is to remove the source of exposure. This often means remediation of the lead, a process initiated through an environmental investigation. Form PB-101, Request for Environmental Investigation, is included in the packet sent by DSHS to providers who report a child with an elevated blood lead level. For the local health department to perform an environmental investigation, several conditions must be met, including that the child has a *confirmed* (i.e. venous) elevated blood lead level. The provider must indicate one of the two following conditions on the Pb-101 form:

- ▶ The child has a **venous** level of ≥ 20 $\mu\text{g}/\text{dL}$, or
- ▶ The child has two **venous** levels of 15-19 $\mu\text{g}/\text{dL}$ taken at least three months apart

However, it is often the case that the state's surveillance database records for the child do NOT indicate whether the child's test(s) are venous or capillary because the specimen type or sample collection site was not indicated on the lab submission slip. Without this corroborating information in the database, an environmental investigation cannot proceed.

In order for the surveillance database to be complete, it is crucial that the provider indicate **specimen type** on every blood lead specimen whether it was drawn from a venous or capillary site.



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for Parents!
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New: Specimen Collection Poster

Be sure to order the new specimen collection poster (stock #1-313) from the TX CLPPP literature catalogue (a link is on the web site).

The poster details required steps in collection of blood lead specimens, including the **soap and water wash** step for capillary collection.

In addition, the poster includes reporting reminders, and photos of current DSHS lab supplies.

Why is Lead Used in Ceramic Glaze?

Egypt, 3200 B.C.

It's a cold desert night, the tribe is gathered around a campfire. Two inattentive kids knock a water jug into the flames. The next morning, dad retrieves the jug from the fire pit and finds it coated with patches of a glassy substance. The desert sand (silica) has fused in the fire with some naturally occurring alkaline material (borax, maybe?), and the first ceramic glaze is born.

Over the following centuries, cultures around the world would independently perfect the variety of sophisticated, durable, and decorative glazes we see today in museums, collections, and our kitchen cabinets.

As the art of ceramics developed, potters came to learn that their glazes required three basic components. The first two were:

Silica: melts to form the glassy, transparent coating we think of as a glaze

Alumina: acts as a refractory agent, adding strength and scratch resistance to the glaze

Alumina and silica form a crystalline bond, but silica melts at about 3100° Fahrenheit, *way* above the point at which clays can be fired.

The Egyptian dad's water jug incident demonstrated, however, that alkaline components (borax, soda ash, etc.) can bind with the molecules of silica, and *lower* the melting point by a thousand degrees or more. Another ancient potter, experimenting with decorations perhaps, may have thrown a handful of galena (lead ore) onto a pot and discovered lead's similar ability to lower a melting point.

The third glaze component, then, is:

Flux: lowers the melting point of silica

But how did *lead* gain such a foothold throughout the centuries as a flux for ceramic glaze? The unfortunate truth is that lead produces nearly flawless glazes with uniformly brilliant surfaces. It melts smoothly and dependably. Its abundance in the earth's crust makes lead cheap.

In 19th century Europe, the ceramics industry was huge and the widespread poisoning of pottery workers led to the first regulations prohibiting the use of raw lead components (lead oxide or tetroxide) in ceramic glazes. These workers were poisoned by exposure to the raw materials, but we now know that the fired glazes themselves can be hazardous to users.

A lead glaze carefully formulated by a studio potter or reputable manufacturer, using additional oxides and fired high enough, can result in a stable, insoluble glaze. However, the cases of lead poisoning from "cottage industry" ceramics we see today result from low-fired ceramics with unsophisticated glaze formulas in which the lead remains soluble in the fired glaze. Even a weak acid can leach lead from these glazes and poison food or drink that comes in contact with it.

The FDA requires high-lead-leaching decorative ceramicware imported into the U.S. to be permanently labeled with a warning that it is not to be used for food storage and may poison food. Glazed items bought outside the United States often do not carry this warning, and could pose a serious risk if used to store or serve food. ☞



► What to tell families about using pottery and ceramics:

- There's no way to tell if a pot contains lead glaze just by looking.
- Do not store food in traditional or home made pottery.
- Use only "store-bought" dishes, all of which should have passed FDA requirements as lead free.
- Do not use decorative ceramics for food storage—these pieces may or may not carry a warning label.
- Do not store beverages in leaded crystal. The use of lead in crystal has a similar history to its use in ceramics.

Lead Exposure in Children: Prevention, Detection, and Management

The current **American Academy of Pediatrics** policy statement on childhood lead poisoning prevention, detection, and management includes the results of several studies that should provoke a change in how we think about childhood lead poisoning.

The full policy statement is online at the American Academy of Pediatrics site:

www.pediatrics.org/cgi/content/full/116/4/1036

The statement provides an excellent overview of current thought on lead poisoning in the U.S. however it is in the abstract that we find this:

“Evidence continues to accrue that commonly encountered blood lead concentrations, even those less than 10 µg/dL, may impair cognition, and there is no threshold yet identified for this effect.”

As recently as 1989, blood lead concentrations of 15 µg/dL were considered a threshold, and now we are beginning to learn that there is NO threshold for the effects of cognitive impairment. The CDC currently considers 10 µg/dL the “level of concern,” and Texas CLPPP has recently be-

gun an outreach to providers to ensure that tests in this range are followed up according to CDC guidelines.

Blood lead levels in children with lead exposure tend to peak and then decrease after two years of age, presumably due to a decrease in hand-to-mouth activity and increasing body mass. However the Academy statement references study after study demonstrating a relationship between low level exposures and various impairments extending into childhood and beyond. And, according to the statement:

“There remains no evidence that chelation will reverse cognitive impairment, and the predominance of data is consistent with a noncausal association between decreasing blood lead concentrations and improved cognitive test scores.”

The statement abstract includes this:

“The focus in childhood lead-poisoning policy...should shift from case identification and management to primary prevention, with a goal of safe housing for all children.”

A section of the statement provides a cost-benefit analysis of prevention activities that demonstrates the benefits of permanently abating hazards in the nation’s pre-1960 housing.

The statement concludes with a list of seven recommendations for pediatricians that emphasize staying abreast of current regulations and guidelines in order to assess risk and provide anticipatory guidance to families. Eight recommendations for government include funding studies and research, finding low-cost prevention strategies, and managing data.

A list of 59 references included with the statement provides direction for further study. ☞

News from El Paso CLPPP

The City of El Paso’s Community Development Department has purchased billboard space to publicize its Lead-Based Paint Hazard Control Program. The billboard is located along IH-10. The caption reads “Protect Your Home and Child with Free Lead Testing.” Below this, the message is printed in Spanish. It includes a phone number and states “Free To Those Who Qualify.”

The El Paso Community Development Department works through a HUD grant, and has a memorandum of understanding with the El Paso Childhood Lead Poisoning Prevention Program. Children of families who qualify for this program are referred to the CLPPP program for lead testing.

Texas CLPPP Staff

When you have questions about:	Ask for:
Program Management and Administration	Program Coordinator
Data management and services	Data Supervisor
(Will call YOU if reporting forms are incomplete.)	Data Entry Coordinator
Lead poisoning in persons over age 14	Adult Lead Coordinator
Following up a specific child's case	Follow-up Coordinator
Data analysis at state and local levels	Epidemiologist
Setting up an environmental investigation	Environmental Specialist
Publications and outreach, web site	Outreach Specialist



Tear-out Fact Sheet for Caregivers and Parents

This fact sheet is designed for parents or caregivers with limited reading or English abilities. Photocopy to hand out to your patients, or download a color version from our web site. It is also available online in a slightly more detailed version.

Call today - we're here to help! 1-800-588-1248

Everything's Bigger in Texas: Including the Poverty

Challenge someone to name the three poorest states, and most folks will respond, "Mississippi, Alabama and Louisiana." That's only 1/3 correct.

Mississippi, yes, but it's Arkansas and New Mexico, not Alabama and Louisiana, that round out the top three. (Surprise: Alabama's poverty rate is **lower** than Texas'.) Among the 50 states, Louisiana comes in at number 4 with a whopping 17% of its people living in poverty.*

And then there's Texas. We have a 16.4% poverty rate, and only California (with a lower rate) can beat us for the sheer numbers of people living in poverty. The July 2004 census estimates Texas' population at 22,490,022, with 3,688,363 people estimated living below the poverty line.

At the other end of the spectrum is tiny New Hampshire with a 5.7% poverty rate. Texas has over 3.6 million **more** people living in poverty than New Hampshire does!

Here's another way to look at it: in Texas the number of people living below the poverty line outnumbers the entire population of Wyoming 7 to 1.

With these figures in mind, it's important to remember that low income is a known risk factor for lead poisoning. Of children identified with a blood lead level "of concern" in Texas, 85% are enrolled in Texas Health Steps.

*District of Columbia has a poverty rate of 16.8

Poverty figures from U.S. Census Bureau, 3-year average, 2002-2004

Removing Residual Lead Contamination from Skin – Here's Another Way

The new poster, Collecting a Good Specimen,* reminds labs and providers to use a **soap and water wash** before taking a capillary draw for a blood lead test. Residual contamination on the skin can cause a false positive result, creating unnecessary trauma for a child and family and increasing the chance that a child will be lost to follow-up.

An alcohol wipe alone will not remove lead contamination on the skin, however there is an alternative to hand washing.

Esca Tech, Inc. (www.esca-tech.com) manufactures D-Wipe Towels, similar in appearance to baby wipes. The towels are saturated with a special solution that removes heavy metal contamination from the skin. According to Esca-Tech, the D-Wipes can also be used to clean work surfaces where contamination may be present.

D-Wipes are packaged in various size canisters and can be ordered with locking wall mounting brackets.

* Publication #1-313, is available through the DSHS literature catalogue link on the TX CLPPP web site.

Fact Sheet:

Texas Department of State Health Services

Childhood Lead Poisoning Prevention Program



Lead poisoning hurts many children in Texas.

About Lead

Lead is a metal found all over the earth, and it is poison if a child eats or breathes it.

Thousands of years ago, humans learned to use lead. Lead is very common, so it is cheap. It is easy to work with so it became useful in many ways. Early people glazed pots with it, used it for plumbing, used it in artist paints.

For a long time, people have known that lead is poison. But governments did not make laws about using it in things like house paint until the 1900s.

As lead paint gets old, it chips off and turns into dust in the home or outdoor play areas. In 1978 the United States passed a law against putting lead in paint. But many children are still poisoned by lead paint on old houses.

Dirt can also have lead in it from back when cars used leaded gasoline. Some folk medicine has lead, glazed pottery can have lead, even children's toys and play jewelry can have lead.

How Lead Hurts Children

Lead gets into the body and stays in the bones, tissues and blood.

Sometimes there is no way to tell that lead is hurting a child. Lead hurts almost all parts of the body, like the kidneys and the

brain. Lead can make a child develop slowly and have a lower IQ score. If left alone, very high lead levels can kill children.

A blood test can tell if there is lead in the body. The TX CLPPP and the Centers for Disease Control (CDC) have information about treating lead poisoning, but the most important thing to do first is to find the lead that is causing a problem and get rid of it.

What is the Risk?

Children under age six are most likely to get lead poisoning.

Babies and toddlers put their hands and toys in their mouths. This is how they pick up lead paint chips and dust from floors or around windows and doors. And, a child's stomach can soak up much more lead than an adult's stomach does. Young children's brains are more easily hurt by lead.

Children from poor families get more lead poisoning, because they more likely live in old housing with lead paint.

Some groups of people get more lead poisoning. African-American and Hispanic children living in very old housing get more lead poisoning than white children living in similar housing.

Texas CLPPP has forms that can help doctors decide if a child could be getting lead poisoning.



Keeping Children Safe

Lead poisoning can be prevented.

TX CLPPP has information for parents, doctors and teachers about how to prevent lead poisoning. Parents can learn about cleaning lead from the home, and how to keep from bringing lead dust home on their work clothes. Parents can learn which ceramics might have lead, how to be careful with drinking water and how good food helps.

Testing

Every Texas child should have a lead test at 12 months and again at 24 months of age.

Lead tests are **required** for children in the Texas Health Steps program.

At other ages, the doctor might ask the parents certain questions to see if the child needs another lead test.

The CDC says that almost all young children should be tested for lead to help end lead poisoning in the U.S.

Getting Well

If a child has lead poisoning, the TX CLPPP can help the family until the child gets better.

This help could be home visits by a nurse or social worker, helping to find lead in the house, removing the lead, and helping get the child tested again to make sure the lead level is lower.



Texas Department of State Health Services • Childhood Lead Poisoning Prevention Program

1100 West 49th Street • Austin, TX 78756
1-800-588-1248

Call us! 1-800-588-1248

Texas has many local and regional childhood lead poisoning prevention programs. Check our website for a list of these programs.

www.dshs.state.tx.us/lead



The EPA on Hazardous Substances

The Environmental Protection Agency identifies the most serious hazardous waste sites in the nation, places them on the National Priorities List, and targets them for long-term federal clean-up activities.

The table below lists, in order of priority, hazardous substances that are most commonly found at facilities on the National Priorities List and which are determined to pose the most significant potential threat to human health due to their known or suspected toxicity and potential for human exposure at these NPL sites.

Lead has been found in at least 1,280 of the 1,662 current or former NPL sites. (This number may increase as more sites are evaluated.) And even though these sites may not pose a direct threat to children, lead's place on the list of hazardous substances indicates how widespread it is and how toxic.

Top 20 Hazardous Substances from the 2003 National Priority List

1. ARSENIC
2. LEAD
3. MERCURY
4. VINYL CHLORIDE
5. POLYCHLORINATED BIPHENYLS
6. BENZENE
7. CADMIUM
8. POLYCYCLIC AROMATIC HYDROCARBONS
9. BENZO(A)PYRENE
10. BENZO(B)FLUORANTHENE
11. CHLOROFORM
12. DDT, P,P'
13. AROCLOR 1254
14. AROCLOR 1260
15. DIBENZO(A,H)ANTHRACENE
16. TRICHLOROETHYLENE
17. CHROMIUM, HEXAVALENT
18. DIELDRIN
19. PHOSPHORUS, WHITE
20. CHLORDANE

From the Agency for Toxic Substances and Disease Registry
<http://www.atsdr.cdc.gov/>

Lead in Candy

The potential for children to be exposed to lead from candy imported from Mexico has prompted the U.S. Food and Drug Administration (FDA) to issue warnings on the availability of lead-contaminated candy and to develop tighter guidelines for manufacturers, importers, and distributors of imported candy.

Lead has been found in some consumer candies imported from Mexico. Certain candy ingredients such as chili powder and tamarind may be a source of lead exposure. Lead sometimes gets into the candy when processes such as drying, storing, and grinding the ingredients are done improperly. Also, lead has been found in the wrappers of some imported candies. The ink of these plastic or paper wrappers may contain lead that leaches into the candy.

Read more at:

<http://www.cdc.gov/nceh/lead/faq/candy.htm>

Be a Hometown Hero

In December, a south Texas physician with a great idea got us to thinking: newspaper articles written by local physicians could have a big impact on community perception of health issues – especially in small towns.

But we know that healthcare providers have more pressing issues than writing articles for the local gazette.

So, we're asking Texas providers to take us up on an offer: if you contact our outreach specialist (by phone or through the website) we will help ghostwrite an article for you! You can supply a few facts about your practice if you like and we'll combine that with important information about lead poisoning prevention and a parent checklist.

You can do the final editing and then we'll even help contact the local paper about placement if you want us to. We hope you'll take advantage of this opportunity to get the word out in your area about steps parents can take to protect their children from lead poisoning.



More and More Texas Children are Being Raised by Grandparents

Grandparents have a huge impact on educating and caring for children in Texas. Census figures for 2004 estimate that almost 600,000 grandparents share a household with grandchildren under 18 years of age. Of that number, over 250,000 grandparents are responsible for the care of their grandchild(ren). Over ten percent of the children in the U.S. being raised by a grandparent live in Texas.

Demographic information about grandparents raising their grandchildren is limited, however it appears that this phenomenon occurs across race and socioeconomic borders.

Texas CLPPP is looking at ways to expand grandparents' knowledge about lead poisoning. These grandparents raised their own children before screening for lead poisoning became widespread. As well, they may have missed out on outreach efforts such as information sent home with new mothers. Personal stories on grandparent support sites indicate the hesitancy grandparents feel about asking for financial and social services to help support their grandchildren – again they may miss the typical sources of lead information such as that provided by WIC and THSteps.

Texas CLPPP urges providers to pay special attention to educating grandparents who are guardians of young children.

Did you know:

In 2002, the American Association of Poison Control Centers received more than 80,000 reports of children under six ingesting non-food items such as toys and other foreign objects. At least two cases on record involve the death of a child from ingestion of a lead curtain weight.

Simple Mistake... Lost Opportunity for Follow-up



When Texas CLPPP receives a report of a child lead level of 15 or above, a series of follow-up steps are set in motion. One of the most important steps is an information packet we send to the parent via registered mail. The packet includes information on follow-up activities that must take place to protect the child, and for most families, this is the only printed follow-up information they will receive.

Unfortunately, as many as 10% of packets are undelivered because TX CLPPP has been supplied with an outdated home address for the child.

Another important activity that requires a current address is a home visit, a valuable resource to a family that could benefit from follow-up such as nutritional intervention or an environmental investigation.

Lower-income children are at highest risk for lead poisoning. They are also in a population more likely to be mobile.

Please verify that you are providing the patient's current home address on blood lead reports, especially in the case of a child with an elevated blood lead level.

Reminders—

► **Report ALL blood lead test results, not just those above 10 µg/dL**

► **This information must be included on blood lead reports:**



Child's name

Date of birth

Gender

Ethnicity

Race

Address

Blood lead result

Type of blood sample

Name and address of testing laboratory



capillary



<http://www.dshs.state.tx.us/lead>

PERIODICALS

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POSTMASTER: Send address changes to:

TX CLPPP
1100 West 49th St.
Austin, TX 78756

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Local Health Department CLPPP Programs

Austin/Travis County	211 Comal Street	Austin, TX 78702	512-972-6652
City of Dallas	4500 Spring Avenue	Dallas, TX 75210	214-670-7663
City of Houston	8000 N. Stadium Dr., 6th Floor	Houston, TX 77054	713-794-9349
City of Laredo	2600 Cedar Street	Laredo, TX 78040	956-726-2682
El Paso City/County	5115 El Paso Drive	El Paso, TX 79905	915-771-5805
Harris County	2223 West Loop South	Houston, TX 77027	713- 439-6126
San Angelo/Tom Green Cty.	2 City Hall Plaza	San Angelo, TX 76903	915-657-4214
San Antonio Metro	332 W. Commerce, Suite 101	San Antonio, TX 78205	210-207-8853

