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LEAD-BASED PAINT POISONING: STATE AND LOCAL RESPONSES

HEARING

BEFORE THE

SUBCOMMITTEE ON HOUSING AND TRANSPORTATION

OF THE

COMMITTEE ON
BANKING, HOUSING, AND URBAN AFFAIRS
UNITED STATES SENATE

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

ON

ENSURING THAT CHILDREN WITH DANGEROUS LEVELS OF LEAD IN THEIR BLOOD ARE IDENTIFIED AND RECEIVE CARE AS EARLY AS POSSIBLE, AND TO INTRODUCE PROGRAMS TO PROPERLY SCREEN AND TREAT CHILDREN FOR LEAD POISONING

NOVEMBER 13, 2001

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LEAD-BASED PAINT POISONING: STATE AND LOCAL RESPONSES

TUESDAY, NOVEMBER 13, 2001

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
SUBCOMMITTEE ON HOUSING AND TRANSPORTATION,
Washington, DC.

The Subcommittee met at 2:35 p.m., in room SD–538 of the Dirksen Senate Office Building, Senator Jack Reed (Chairman of the Subcommittee) presiding.

OPENING STATEMENT OF SENATOR JACK REED

Senator REED. Let me call this Subcommittee hearing to order and welcome all of you and my colleague, the Ranking Member, Senator Allard of Colorado.

Today, we are looking forward to a hearing on the lead-based paint poisoning issue, in particular, State and local responses.

Recently, in my home newspaper, the *Providence Journal* in Rhode Island, Peter Lord did a series of columns and stories that illustrated the seriousness of this problem, and particularly, its effect on children. I hope that today, listening to local authorities, we can get a better sense and perspective on this issue, and particularly, again, its impact on children.

Despite significant progress in the fight against childhood lead poisoning, lead-based paint remains the most serious environmental hazard for children in the United States. In my own State of Rhode Island, both our General Assembly and our Governor's administration have identified lead paint as the number one environmental health issue facing Rhode Island's children.

According to the Center for Disease Control and Prevention, nearly one million preschool children living in the United States have blood lead levels high enough to impair their ability to think, concentrate and learn.

Unfortunately, except for severely poisoned children, there is no medical treatment for the disease. Even then, treatment may only reduce the level of lead present in the body, and not reverse the harm already caused.

The only way effectively to prevent lead poisoning is to remove the source of exposure. After eliminating lead from gasoline, dietary sources, such as beverage cans, and paint in 1978, the primary cause of childhood lead poisoning today is exposure to lead-based paint applied to residential properties prior to 1978, when the paint was banned.

More specifically, it is the ingestion of lead-contaminated surface dust from chipping or peeling paint, friction from opening or closing windows, and lead paint disturbed during remodeling and repainting projects. This lead dust gets onto children's hands and toys, poisoning them while they engage in normal play activities, such as putting hands, toys and other objects into their mouth.

Thus, despite the fact that lead paint has not been sold for residential use in more than 20 years, it continues to cause serious health problems in children. Lead paint placed on walls decades ago has not been removed, but instead, covered up by layers of other paint.

The layering effect means that children today are still at risk for exposure to lead paint that may have been applied to the homes decades ago. In addition, national health data indicate that low-income children are eight times more likely to be lead-poisoned than children from well-to-do families, and African-American children are at five times higher risk than white children.

As a result, I have introduced two bills along with my colleague, Senator Torricelli, that are intended to improve our ability to detect and treat children at high risk of lead poisoning, as well as expand our network of Federal program sites where children at increased risk for lead poisoning can be screened.

The Early Childhood Lead Poisoning Prevention Act requires WIC and Head Start Early Start programs with children under age three to assess whether a child participant has been screened for lead and provide and track referrals for any child who has not been appropriately screened.

The Children's Lead Screening Accountability For Early Intervention Act, or the Children's Lead Safe Act, would require Medicaid contractors to comply with existing requirements to provide screening, treatment and any necessary follow-up services for Medicaid-eligible children who test positive for lead poisoning.

In addition, I and a number of my colleagues have been pushing the Administration and Congress to dramatically increase funding for HUD's Office of Lead Hazard Control. It is our hope that for fiscal year 2002, the Administration will make lead poisoning a priority and allocate at least $250 million for that much-needed and dramatically-underfunded lead hazard control grant program at HUD.

However, today's hearing will focus on the nature and extent of lead-based paint poisoning, what percentage of our Nation's housing stock is hazardous, and initiatives being undertaken by local and State governments to deal with this problem.

This hearing is only the first in a series on lead-based paint poisoning. It is my hope that these hearings will help shine a light on this terrible problem, energize the Federal Government into playing a greater role, and improve local, State, and Federal cooperation in the process. More needs to be done. No child should have to live with the consequences of this preventable disease.

We will hear from two panels of witnesses. The first panel will consist of: Susan Thornfeldt, Director of the Maine Lead Action Project; Bruce Lanphear, Associate Professor of Pediatrics, Children's Hospital Medical Center, Cincinnati, Ohio; and Nick Farr, Executive Director, National Center for Lead-Safe Housing.

On our second panel, we will hear from three local and State officials about their efforts to solve the lead-based paint problem in their localities.

We will be asking all the witnesses to discuss, one, the nature and extent of lead-based paint poisoning in their communities; two, the past and present approaches they have been involved in to eliminate lead-based paint poisoning; and three, what more needs to be done to make our Nation's housing lead-safe.

But before I call the witnesses forward, let me recognize the Ranking Member, Senator Allard of Colorado.

Senator Allard.

STATEMENT OF SENATOR WAYNE ALLARD

Senator ALLARD. Thank you, Mr. Chairman.

I would just like to thank you for holding this hearing on the hazards of lead-based paint in residential housing. Fortunately, Colorado is not at the top of the heap on this one. As I understand, your State of Rhode Island is. We have about a 3 or 4 percent incident that occurs in children, which ranks us just past the median.

Although we have a relatively low percentage compared to other States, and especially Rhode Island and some other places here on the East Coast, this is still one of those issues that we are happy to be doing something about. This is an issue of great concern in my State, even though we have that low percentage. It will continue to be until significant lead-based hazards are under control.

I am looking forward to a constructive hearing that focuses on reducing the risk to children of lead-based paint in housing.

According to the Centers for Disease Control and Prevention, childhood lead poisoning is the most common environmental disease of young children. Even low levels of lead contamination have been linked to the impairment of mental development and muscle control, hearing and emotional development.

Research has shown that the most common source of lead exposure for children today is lead paint in older housing and the contaminated dust and soil that it generates. We have come a long way in reducing the hazard to children from lead. Blood lead levels in children have dropped dramatically since the 1950's. But this does not mean we have conquered the problem.

The Department of Housing and Urban Development estimates that three-quarters of pre-1980 housing units contain some lead-based paint. This paint becomes hazardous when it is not properly maintained, when children come into contact with chips of paint and the dust it creates.

We are here today to hear about how lead-based paint hazards affect exposed children and how State and local governments are controlling this problem in their housing stock. A lot of local governments have implemented programs and solutions that focus on abatement of flaking or decaying paint, training for homeowners and painters during remodeling projects, blood testing and awareness campaigns, and incentives for landlords to better maintain their property.

Colorado, for example, issued regulations to address lead-based paint hazards in pre-1978 housing and child-occupied facilities.

The Department of Public Health regulates risk assessment, inspection, and the control or elimination of hazards in its targeted housing. The Department also dedicates about half of its effort to outreach and education of Colorado residents and property owners on identifying and controlling lead hazards. Efforts like these deserve our support and immediate implementation.

I would like to thank all of our witnesses for being here today and I look forward to hearing from all of you on how we can best address this problem at the Federal level. I would like to extend a special welcome to Richard Fatur with the Colorado Department of Public Health and the Environment. I am glad you are here to share with us Colorado's progress in addressing this issue.

Again, I would like to thank my colleague for holding this hearing and I look forward to working with him on this matter.

Senator REED. Thank you very much, Senator Allard.

We have been joined by the Chairman of the Full Committee, Senator Sarbanes. Senator, would you like to make an opening statement?

STATEMENT OF SENATOR PAUL S. SARBANES

Senator SARBANES. Mr. Chairman, I want to thank you for holding this hearing on lead-based paint poisoning. This is clearly a very important topic. Over a million children across the country experience lead poisoning.

We have a serious problem in my own State, particularly in Baltimore City, which ranks tenth amongst counties and cities with high lead hazards.

Minority and low-income children are disproportionately affected by this serious condition and it is really a solvable problem.

Mr. Chairman, I want to commend you for the panel that you have assembled here today to try to ensure that our children live in lead-safe housing. We will be hearing about actions taken at the State and local level to address lead hazards in a number of communities. Obviously, there is a role for the Federal Government to play as well and I look forward to working with you and Senator Allard in that endeavor.

We have put in a number of programs in Maryland to try to address these issues such as the Maryland Lead Screening Program, to help raise awareness about lead hazards. In 1996, the Maryland legislature passed legislation requiring landlords to maintain their housing units so that the housing remains safe. It requires them to take steps to reduce lead hazards already existing. As always, when you enact legislation, you also have a follow-on enforcement problem and we need to be paying attention to that.

One of your witnesses, Nick Farr, Executive Director of the National Center for Lead-Safe Housing, which is a nonprofit organization based in our State, is to be commended for their work with respect to providing safe housing for children.

Mr. Chairman, although I will not be able to stay for the whole hearing, I will stay and give support as long as I can.

Senator REED. Thank you very much, Senator Sarbanes.

Senator ALLARD. Mr. Chairman.

Senator REED. Senator Allard.

Senator ALLARD. I would just like to ask your indulgence and the indulgence from those on the panel. At 3 p.m., I have a mark-up of a piece of legislation in another committee. In other words, we are adopting amendments and what not, and I will have to dismiss myself. I apologize that I will not be here for the full hearing.

Thank you, Mr. Chairman.

Senator REED. Thank you, Senator.

Let me recognize and introduce the first panel.

Susan Thornfeldt is the mother of two children poisoned by lead. She is the founder and Executive Director of the Maine Lead Action Project in Portland, Maine. She also serves on the board of the Alliance to End Childhood Lead Poisoning.

Dr. Bruce Lanphear is Associate Professor of Pediatrics and Director of the Children's Environmental Health Center at the Children's Hospital Medical Center and the University of Cincinnati, in Cincinnati, Ohio. He is also Deputy Editor of *Public Health Reports*—the journal of the U.S. Public Health Service—and was recently appointed as a member of the expert advisory board on Children's Health and the Environment in North America. He conducts research in environmental health and is a widely-recognized expert in residential factors linked with lead exposure, asthma, and injuries.

Nick Farr is the Executive Director of the National Center for Lead-Safe Housing. Mr. Farr has previously served as Vice President of the Enterprise Foundation, Executive Vice President of the North American Mortgage Company, Executive Director of the California Housing Finance Agency, General Deputy Assistant Secretary for Community Planning and Development at HUD, Professor of Law at the NYU Law Center, and Director of the Model Cities Administration.

Now before you all begin, I would first like to thank you for your written testimony, which has been shared with Members of the Subcommittee, and I would ask you to stick to the 5 minute time limit, if you could. We have the full text of your testimony and that is now part of the record.

Ms. Thornfeldt.

STATEMENT OF SUSAN THORNFELDT
DIRECTOR, MAINE LEAD ACTION PROJECT

Ms. THORNFELDT. Thank you.

Good afternoon and I want to thank you for your efforts to highlight lead poisoning and for giving me the opportunity to share our family's story. I am the mother of a little boy named Sam, who was poisoned by lead. As Senator Reed has noted, I am the Director of the Maine Lead Action Project and I also serve on the Board of the Alliance To End Childhood Lead Poisoning.

Lead poisoning entered our lives soon after we purchased our 170-year-old home. It is a late 19th Century colonial, nestled in a nice residential, coastal neighborhood in Portland, Maine. My husband and I chose an older home, like many of us do, for its charm, beautifully detailed woodwork, and its stately graciousness. As eager, first-time homeowners, we soon began our much-needed renovations.

What we did not know, until our child became inexplicably ill, was that our home contained lead. We were unaware of the dangers, and the serious, permanent health effects lead could have on our children.

I first became acquainted with the topic of lead poisoning in an article from a very popular parenting book; as a first-time mother and voracious reader, I absorbed every bit of information about child development. I came across a half page devoted to childhood lead poisoning, which in a nutshell, explained the rapid rate a child's brain grows from birth to age 6 and the irreparable, cognitive damage lead could do to children. I did not have to read another word. At my urging, my son's pediatrician did a lead screen on Sammy and delivered the news that, he indeed had elevated blood lead levels. He was screened much more frequently from 6 months to 2 years old, his levels climbing higher with each visit. This came as a total surprise to my husband and me because we were now religiously cleaning and washing Sam's hands and toys much more often. This was, quite honestly, the only preventative advice we had received.

I am sure many other parents of lead-poisoned children have heard their own public health department imply, "Go home, feed your children better, watch them more carefully, clean your house, and by the way . . . good luck." Though it may not be said outright, this is the message that is clearly being delivered. Why are we, as parents, made to feel that we are somehow responsible for the poisoning of our children? Does childhood lead poisoning end with the distribution of brightly colored brochures, frequent hand washings, and ABC's of good nutrition? These are the Band-Aids covering up a much bigger problem—toxic paint lurking in our country's housing.

Sadly, Sam was diagnosed with lead poisoning soon after his second birthday. As a parent, it is heartbreaking knowing that the home you provided for your child was slowly poisoning him everyday. There is no deeper feeling of sadness, frustration, and helplessness.

In order to avoid poisoning Sam once again, and endangering our daughter, Alexandra, who had just started crawling, we chose to move out while lead abatement was performed on our home. I cannot emphasize enough the challenge of coping with the enormous stress of caring for a sick child, relocating, and dealing with the financial burden—at times it was unbearable. Looking back, I am not quite sure how we pulled it off. But I now have to believe the worst is behind us, and Sammy will have a happy childhood, and normal, productive school years. But for many children, lead poisoning prevents them from succeeding in school or in life.

Though many other stories may begin much differently than mine—maybe in an apartment in Chicago, on a farm in rural Louisiana or in a home on the West Coast—many of them share a common theme: Our children served as the lead detectors alerting us to the hazards of living in a home contaminated with lead-based paint. If there is one thing that I have learned from my experiences, it is that the system set up to protect our children from lead poisoning is, sadly, reactionary.

Screening children for lead in their blood is important to finding and treating sick children. But allowing children to serve as lead detectors is no solution to the environmental disease of lead poisoning—it is an immoral approach. In fact, health departments' preoccupation with screening children often obscures the need for and deflects resources from finding and fixing hazardous houses.

We can make sure that what happened to my children does not happen to other children. But, to do so, we have to confront the reality of lead poisoning—this is a disease that a healthy child catches from a house.

There is only one real way to protect children from lead poisoning—and that is to prevent and control hazards in children's homes. We need to find the homes with lead-based paint hazards and control those hazards before a child is needlessly exposed.

As our family's experience proves, educating parents about handwashing, and nutrition and hygiene will not solve this problem. Children do not need to be told to eat their vegetables and wash their hands—they need homes that are safe from lead-based paint hazards. What is politely called "parent education" really amounts to passing the buck. Of course, nutrition, hygiene, and housekeeping are beneficial, but the fact that my home was dangerous—and millions of homes across the country are still dangerous today to children, not because of any lapse in parenting, but because the lead paint industry cared more about making money than safety. Despite the overwhelming evidence of the danger of its product and the availability of safer alternatives, the lead paint manufacturers knowingly marketed a poisonous product for decades.

To add insult to the injury they caused, the paint industry is a big proponent of "parent education." Benjamin Moore congratulates itself on helping communities hold "fun and educational" events about lead poisoning for families. Well, I want Benjamin Moore to know that lead poisoning is no fun.

Children and families have paid the price for the industry's misconduct. Taxpayers have paid the price for the industry's misconduct—hundreds of millions of local, State, and Federal dollars. As a parent and taxpayer, I am tired of paying. I want to know when the companies that caused this problem are going to help pay for solving this problem.

We as a country can protect children from lead poisoning. We know what to do, what solutions work. We have set the national goal of ending this disease by 2010. But solutions cost money. It is time for the lead industry to pay its fair share. And it is time that everyone—communities, Government, and industry—do the job right to eliminate lead poisoning once and for all.

Thank you.

Senator REED. Thank you very much, Ms. Thornfeldt.

Dr. Lanphear.

STATEMENT OF BRUCE P. LANPHEAR, MD, MPH
ASSOCIATE PROFESSOR OF PEDIATRICS
CHILDREN'S HOSPITAL MEDICAL CENTER
CINCINNATI, OHIO

Dr. LANPHEAR. I would like to thank you all for the opportunity to share some of the research and thoughts on primary prevention of lead poisoning.

Lead poisoning, like other diseases, has evolved through three stages—recognition of an acute disease, elucidating the disease spectrum and mechanisms of exposure, and finally, prevention and control of exposure.

What is unique about lead poisoning, or contrasted with some other diseases, is that its evolution was hampered or obstructed at each stage by industry efforts.

Despite the dramatic declines that we have seen in children's blood lead levels over the past two decades, subclinical lead toxicity remains a major public health problem. In many parts of the country, it remains epidemic, particularly in older cities, in the northeast, the midwest, the southeast, but even in special communities or smelter communities in Colorado and others in the west.

It is a systemic toxicant associated with numerous adverse conditions and diseases in humans. The cognitive deficits that we so often think about are just the tip of the iceberg.

There is no magic medical bullet or therapy. The evidence has come out suggesting that the adverse consequences of lead exposure are persistent and irreversible.

It is a major environmental justice problem particularly affecting children of color and leading to disparities in school problems and evidence now suggests delinquency.

It has been long known that lead is a systemic toxicant. In the 1970's, it was estimated that a one-microgram per deciliter reduction in blood lead levels in adults would lead to 635,000 fewer persons in the United States with higher blood pressure, 3,200 fewer heart attacks every year, 1,300 fewer strokes every year, 3,300 fewer deaths every year. There is also increasing and compelling information that lead is neurotoxic at blood lead levels less than 10 micrograms per deciliter.

Children, for example, who have a blood lead level of 10 micrograms per deciliter, have been shown to have a 15 point deficit linked to lead exposure. We can find evidence down below 5 micrograms per deciliter. So the million children that have been discussed today should be multiplied many-fold. It is millions and millions of children.

Moreover, there appears to be greater decrements in reading and intelligence at lower blood lead levels. So, for example, across a range of blood lead levels. In our Rochester cohort, we found about a 5.7 reduction in IQ scores for each 10 microgram per deciliter. But when we limited that to children with blood lead levels less than 10, there was an 11 point drop for the initial 10 micrograms per deciliter.

These effects are not subtle. Indeed, what they suggest is that the vast majority of children who suffer from the adverse consequences of lead exposure never attain blood lead levels greater than 10 micrograms per deciliter. But this should not surprise us.

Contemporary children, despite the rather dramatic decline, still have increased blood lead levels 10 to 100 times that of preindustrial humans.

There is also increasing evidence that lead is linked with behavioral problems and delinquency. Indeed, there is some suggestion, and the science is bearing this out, that the dramatic increase in crime in the last century may be due not simply to social decay, but, rather, widespread exposure to a potent neurotoxicant. Well, what do we do about this?

As we have already heard, in the past, most of our response has been reactionary. We have relied on children as biological indicators of substandard housing. Unfortunately, this does not work if the adverse effects of lead exposure are persistent and irreversible.

What type of steps should we take?

First, as many cities and States have done, we can begin to identify before a child is unduly exposed neighborhoods and housing that contain lead hazards. We can conduct targeted screening of housing with wipe tests, what I think virtually every advocate and public official would recognize as the single most important tool.

In this case, screening children becomes a safety net. It does not become our primary effort to prevent childhood lead exposure.

While there is considerable evidence that lead abatement and other kinds of lead hazard controls are effective for children at higher blood lead levels, blood leads of 25 to 30 micrograms, there is still some uncertainty about their effectiveness at lower blood lead levels and that work needs to be done.

Finally, lead hazards are just one of many residential hazards that children suffer from today. Sixty percent of all fatal injuries in children occur in housing. Over 50 percent of nonfatal injuries occur in housing. Over 40 percent of doctor-diagnosed asthma can be attributed to housing exposures.

Until we begin to address residential hazards like lead poisoning and others in a more comprehensive way, we won't address the dramatic social disparities that we see, nor will we protect children's health.

And so, I would suggest that there needs to be a National Institute for Safe Housing to address lead poisoning and other residential hazards, because until then, until effective standards for the domestic environment are devised, it is likely that children will continue to be employed as biological indicators of substandard housing.

Thank you.

Senator REED. Thank you, Dr. Lanphear.

Before I recognize Mr. Farr, we have been joined by Senator Dodd. Senator, would you like to make an opening comment?

STATEMENT OF SENATOR CHRISTOPHER J. DODD

Senator DODD. Mr. Chairman, thank you for holding this very worthwhile hearing. I want to thank our witnesses, and I appreciated the chance to hear Dr. Lanphear. I could not agree with you more about your analysis and the potential harm, or the known harms caused by lead paint and the very real connections based on some very strong scientific evidence of behavioral problems that are linked to potential lead paint issues.

I think this is very helpful and I think the idea of having a broader perspective on it is really tremendously constructive.

I spent a day in my State last winter on asthma and housing issues. Connecticut has one of the highest rates of it, even though we have a very affluent State and it is directly related to the increased number of children that have asthma, directly relates to poor areas in my State.

There is no question but the condition of housing and the explosion of asthma in children is linked.

Mr. Chairman, I am going to apologize in advance about not being able to stay. Sue Heller is one witness you are going to hear from, and I suspect that every one of the people at the table know about Sue.

First of all, she is from Rhode Island. She has a Rhode Island background, from Brown University.

Senator REED. That explains it.

[Laughter.]

Senator DODD. Well, you are the Chairman. I was going to say that. Of course, I was going to say that.

But you did not keep a hold of her because she is in Connecticut now, and has done a terrific job in Manchester and really has a wonderful national reputation for her work in the lead paint area and the lead-based paint poisoning issues.

Again, you will hear from her. You will know what I am talking about. We have had the wonderful pleasure of working with her for a long time. She has made a huge difference, and the people she works with in a community, an example nationally of what can happen when local government, private-sector people, contractors and others, all are working on the same page to deal with a problem of this magnitude and prove that 6 percent of the kids were affected by it, poor kids, as much as 10 percent. Those are pretty high numbers, in a relatively affluent community in my State. But Sue's leadership on this has been tremendous and she will be a very valuable contribution to the information that we will be collecting today.

I apologize to her in advance for not being here, but I get to hear Sue all the time, so I know how you feel about this. And again, Mr. Chairman, I thank you for holding this hearing.

Senator REED. Thank you, Senator. Thank you very much.

Mr. Farr.

STATEMENT OF NICK FARR, EXECUTIVE DIRECTOR NATIONAL CENTER FOR LEAD-SAFE HOUSING

Mr. FARR. I am the Executive Director of the National Center for Lead-Safe Housing. We are a national research organization. We have evaluated the local lead hazard control programs in about 30 places, including Rhode Island, Manchester, Connecticut, and Baltimore, Maryland. We are pretty familiar with what is going on locally.

Mr. Chairman, you said in the beginning, and Dr. Lanphear certainly reinforced it, that the only moral and effective way to deal with childhood lead poisoning is to prevent children from being exposed to lead in the first place. It does no good, or it does very little good, to get them after they are already lead-poisoned. So the issue

that I want to talk about is the extent of the housing problem in America where children are exposed.

As has been indicated, most children with elevated blood lead levels are exposed to lead because they live in older, poorly-maintained housing containing lead-based paint, which means virtually all housing built before 1960, and much housing built after that.

According to the recently completed HUD national survey of lead and allergens in housing, some 38 million homes in the United States have lead-based paint somewhere in the building. Over 25 million homes have significant lead-based paint hazards.

Lead-based paint hazards include flaking or peeling lead-based paint, lead-based paint on friction or impact surfaces, such as windows and doors, lead-based paint on chewable surfaces, such as window sills, which children can reach, and, most importantly, excessive levels of lead in dust on floors or window sills and lead-contaminated soil.

The greatest risk of lead poisoning occurs in older housing units that contain lead hazards that either are or will be occupied by low-income families with children under the age of six.

Almost 14 million housing units are occupied by low-income families. While only 1.6 million homes with lead-based hazards are presently occupied by low-income families with children under six, it must be recognized that most low-income families move frequently, particularly those living in rental housing that are most likely to be in poor condition due to lack of maintenance. So it is fair to estimate that the number of lead-hazardous housing units in which low-income families with young children now live or are likely to live in the near future, could well exceed 3 or 4 million houses. And those numbers are based on the present standards of the hazard of lead in household dust.

If Dr. Lanphear is correct that lead at much lower levels than the present standard actually constitutes a hazard, and our research reinforces his position on this, then the number of hazardous houses in the country would be many, many more times than I have just indicated.

So, we are talking about many millions of housing units.

The Congress in 1992 adopted Title X of the Housing and Community Development Act of 1992 and it established the present framework for the Nation's effort to end childhood lead poisoning. Title X importantly shifted the emphasis from waiting until a child is poisoned to trying to deal with lead hazards up front and preventing children from being poisoned in the first place.

Two of the important things that it did was: First, to direct HUD to adopt regulations governing its large Community Development Block Grant, HOME, and other rehabilitation programs to require that reasonable steps be made in those Federally-assisted housing to make houses lead-safe; and, second, Congress established the Lead Hazard Control Grant Program to fund lead hazard control work in privately-owned, low-income housing. And privately-owned, low-income housing is where the problem really exists.

Since 1990, the number of housing units with lead-based paint has been reduced and these reductions can be expected to continue. But the percentage of housing units with deteriorated lead-based paint has actually increased slightly from 19 to 22 percent, reflect-

ing the continuing aging of housing and the too commonly inadequate maintenance of housing occupied by low-income families.

As a direct result of Title X, as many as 1½ million older, Federally-assisted housing may be made lead-safe through HUD-funded rehabilitation over the next 10 years, if the contractors follow lead-safe work practices and do not cause more harm than they do good. And city and State recipients of HUD's lead-hazard control grants are controlling lead hazards in over 7,000 of the most at-risk housing units every year.

The cost of lead hazard control treatments obviously varies from one housing unit to another, depending on the size and condition of the unit, the type of unit, and the lead hazard control strategy selected. It ranges from about $2,000 a housing unit up to $9,000 or $10,000 a unit for deteriorated housing with substantial lead hazards.

HUD estimates that the incremental cost—that is, above regular rehabilitation costs—range from about $2,500 for a house that is in not too bad a condition, to $9,000 for abatement of hazards in housing in poor condition.

As a practical matter, neither market forces nor the present Federal programs are dealing with the most badly contaminated housing where the children are most at risk of becoming poisoned. These are housing units in which two or three or more children become lead-poisoned over the years as a succession of families move in and out of that housing.

For example, we have a map which was developed by Brown University of the housing in Providence where at least two, sometimes three, sometimes four kids have been poisoned over the last 5 years. So it is a persistent problem.

Thus, while progress is being made, at the present rate, it will take at least several generations to make all housing lead-safe for our Nation's children. The Nation will miss the goal cited by Ms. Thornfeldt by the Department of Health and Human Services of eliminating childhood lead-poisoning by 2010. We are going to miss that by a mile.

So here is my prescription of what can be done, to complement what Dr. Lanphear said. First of all, we should make sure that the new HUD lead regulation is fully implemented. That deals with housing which is Federally-assisted.

Second, EPA should enact regulations to establish lead-safe renovation and maintenance practices as the national norm, as Title X almost 10 years ago directed the EPA to do.

Third, rehabilitation of older inner-city housing should be a national priority. Mostly, we are talking about using HUD block grant and HOME funds for that purpose.

Fourth, we should expand environmental testing, as distinguished from testing of children, of older properties in at-risk neighborhoods so we know where the work should be done.

Fifth, we should demolish obsolete and uneconomic properties and provide safe replacement housing for the families that live in those properties.

And finally, we should make certain that no housing like the housing in Providence which I referred to, poisons children once, twice, three or four times.

As a practical matter, HUD's Lead Hazard Control Grant Program is the only realistic source of financing at this time for controlling hazards in the older, low-rent, poorly-maintained housing where children are most at risk.

Private owners are unwilling or unable to make those housing units lead-safe because the cost of lead-hazard control could never be recouped by the property owners. In some cases, the cost even exceeds the market value of the housing. Cities have other needs and priorities for HUD's Community Development Block Grant and HOME funds and may be reluctant to condemn units in the already dwindling stock of affordable housing for fear of increasing homelessness.

For better or for worse, Federal funding, mostly for HUD's Lead Hazard Control Grant Program, is the only realistic way at the present time to deal with the worst housing where children are most likely to be poisoned.

In conclusion, childhood lead poisoning will only end when the Nation changes its priorities and recognizes childhood lead poisoning as an epidemic that must be broadly addressed.

For starters, Congress should sharply increase appropriations for lead hazard control now. At present, the only effective program is HUD's Lead Hazard Control Grant Program. The Center estimates that the annual appropriations for that program must be increased to $400 or $500 million a year if we are to prevent children from being poisoned in generation after generation, and to prevent children who are now failing from school to lead productive lives.

Thank you.

Senator REED. Thank you very much, Mr. Farr.

Thank you all for your testimony today.

Let me begin with Ms. Thornfeldt.

You have a unique perspective as a mother of a child who has been poisoned by exposure to lead. Can you describe essentially the impact it has had on your son and your family? And by the way, how is he doing?

Ms. THORNFELDT. Sammy is now 6 years old and he just started kindergarten in September. So, he has been into the formal school system for about 2 months now. We are not quite sure how well he is going to do. We have high hopes for him and we are going to do the best we can with what we can do.

It has impacted our family greatly. As I noted in my testimony, the enormous stress of dealing with a sick child, the relocation issues, the lead abatement, and the financial strain on our family, we are still recovering from, and this was 4 years ago. So the toll has definitely been stressful.

Senator REED. And in your work with your colleagues in Maine, you see this in many different perspectives. I think that your home was an older home that you renovated.

Ms. THORNFELDT. Yes.

Senator REED. But as Mr. Farr and Dr. Lanphear spoke, there are many lower-income rental units that, are not renovations. It just exists that way. Do you find that in Maine?

Ms. THORNFELDT. No, we do not. Maine has the highest homeownership rate in the Nation, and we are very proud of that. So 60 percent of all of the childhood lead poisonings in our State are

as a result from homeowners renovating and poisoning their own children. In some sort of way, the guilt is pretty tough on parents to actually go ahead and move forward with those renovations and ending up poisoning a child yourself.

Senator REED. Thank you.

Now, Dr. Lanphear, in your testimony, you indicated that if we could spend about $450 million, as Mr. Farr suggested, that we could save about $1.5 billion, or let me say, a considerable multiple. How would we save this? Could you outline it?

Mr. LANPHEAR. Well, that is actually a low estimate because it does not account for other potential hazards or outcomes from lead exposure, such as delinquency, such as tooth decay and oral health problems, such as cardiovascular disease.

Most of the cost/benefit analyses that have been done so far have really focused on cognitive deficits as their major outcome.

Moreover, they focused on an estimate from children who only 20 years ago had blood levels that were higher. And as I pointed out, the decrement in reading or in IQ for children at lower blood levels is much greater.

And so, the lower estimate that was used in previous cost/benefit analysis will underestimate any benefit that will come from this. So it is cost beneficial.

Senator REED. The scientific information about the impact of low levels of lead exposure, what effect should that have on our screening and our treatment approaches?

Dr. LANPHEAR. Well, I think the first thing is, as you have heard from across the panel here, that it really should push us to be focusing on identifying the hazards in housing before a child is unduly exposed. That could happen at the time that somebody buys a home. Certainly after any renovation, a dust wipe could be used. It could be as a part of any Federal subsidy for housing part of a requirement, or for Medicaid-eligible children.

And so, unless we change the trigger for action from a child to the source, in this case, housing, we are never really going to shift to prevent undue lead exposure in the first place. That has to be the key to shifting our efforts.

But I would also point out right now that the EPA standard for residential lead hazards is not adequate to protect children. I think another aspect, and this is in the written testimony, that that needs to be looked at carefully because it provides an illusion of safety to families who are doing the renovation work.

Senator REED. Now, you seem to suggest in your testimony, Dr. Lanphear, that we are just responding to children that have very overt symptoms of high levels of lead. But, yet, the damage is done and perhaps even not really noticed at much lower levels of lead. Is that a fair statement? I do not want to be imprecise.

Dr. LANPHEAR. I would not say most of the children, until you have blood lead levels of 50 or 60, there is no obvious symptoms. But, rather, you have to look at hundreds of children compared to one another before you see it in many cases, although you clearly will have mothers tell you, before a child was exposed, they were a nice, docile, friendly kid. They are exposed and all of a sudden, they have temper tantrums, behavior problems. And of course, this

happens all around the time of the terrible 2's. So it is very difficult to tease apart lead as a neurotoxin versus a developing child.

At lower levels, it is more subtle and you can only see it when you look at populations of children.

Senator REED. But you notice in those lower levels, though, significant losses in cognitive processes.

Dr. LANPHEAR. That is right. In reading, in math, certainly in intelligence. Some people have estimated that for every one IQ point lost, a child's lifetime earnings will be reduced by about $12,000. So that is where some of the cost/benefit comes in.

Senator REED. Thank you, Doctor.

Mr. Farr, in your testimony, you said that the HUD Lead Hazard Control Program is the only funding available, effectively. Do you believe that, in addition to increasing funding, we have to introduce new Federal programs, or would our best approach simply be to fund robustly at the $450 million level, the existing program?

Mr. FARR. Well, right now, I would think that would be the most effective way to move. I mentioned some other things in my testimony and in my written statement that I think would make a difference as well. I would just add sort of in answer to one of your questions to Dr. Lanphear.

Senator REED. Yes.

Mr. FARR. In Maryland, the statute which Senator Sarbanes referred to requires all owners of rental property built before 1950, whenever the property turns over, which is frequently with that kind of housing, to take certain steps to reduce lead hazards. I happen to have drafted those steps, so I think they are pretty good.

It could use a little better enforcement, frankly, if the law is going to be truly effective. But we also, as you probably know, have helped draft and have pushed for introduction of a similar statute in the State of Rhode Island, and it almost passed last time, but it didn't quite.

There are things that local governments can do with encouragement from hearings like this to require owners, particularly of older rental property, to take certain cost-effective steps—we are not asking them to spend hundreds of thousands of dollars—which will make the houses considerably safer.

And the research we have done, some of it with Dr. Lanphear, indicates that what we call interim control treatments, which can be done in the $2,500 to $5,000 range, are effective in bringing the levels of lead and dust down and keeping them down over a period of time.

And in Rhode Island, we found that you could bring dust lead levels on floors down to 10 micrograms per square foot or below; and they stayed that way for 3 years, without undue expenditures. That kind of local effort would make a lot of difference, and you do not need a lot of Federal money to accomplish that.

The reality is the owners of the really bad housing are going to pay no attention to a law like that because they cannot get their money back. So, they just abandon the houses, which you do not need very much, either, in creating homelessness. For the worst housing, where the children are most at risk, I think the best shot is to increase the appropriation to that program.

Senator REED. It seems that, running throughout all your testimony, is this notion of getting away from simply screening children and then treating them individually. But taking, right or wrong, a more public health approach, which is identifying the source of the contagion, which is the worst offenders. You mentioned and you have identified a house in Providence that had several successive families——

Mr. FARR. A whole series of houses, hundreds of houses.

Senator REED. And that by identifying those houses, direct Federal/State resources to remediation and then work your way down the list of the worst- to next-worse, all the way down. Is that being done? Are you seeing that?

Mr. FARR. It is being done in some places. It is what we call targeting, and it is being done. And certainly, the HUD program strongly encourages people to do that. It is a competitive program and you only get money if you are focusing where the need is.

In Rhode Island, for example, the city of Providence has floated some bonds for a variety of rehabilitation projects and it has earmarked some of that money for lead hazard control, which is another good example of what a State and local government can do to supplement the Federal program. Not every State cares about this as much as Rhode Island does.

Senator REED. Well, one of our goals is to make every State care about this as much as Rhode Island.

Dr. Lanphear, do you have a comment about a new paradigm when it comes to looking at the way we deal with the issue of lead exposure?

Dr. LANPHEAR. Yes. I think you hit it as a public health approach rather than this reactionary approach. Going back to this idea of how we think about housing, residential hazards are analogous to occupational hazards of 30 years ago.

We just started to recognize occupational hazards and provide an infrastructure to protect the worker. We have virtually nothing in place to protect where children work, if you will, in the home environment. And where people have the means to provide for their children, and they know how and are given the information, then they can do that.

There are a lot of situations, whether it is a homeowner trying to renovate, or it is families who live in rental property that they cannot control, where their children confront hazards every day. It is a neglected public health problem.

To the extent that we can begin to think about housing as a public health effort, come out with an institute, if you will, that could oversee other agencies' efforts to protect children in housing, review the scientific evidence and come out with recommendations for standards that State and local agencies could adopt, I think we would go a long way to protect children. And without that, we are not going to go a long way in protecting children's health.

Senator REED. Thank you, Dr. Lanphear.

Ms. Thornfeldt, finally, you have been very active in Maine. Are there any local initiatives that you feel are particularly worthwhile that we could emulate across the country?

Ms. THORNFELDT. Well, Maine is not as progressive as Rhode Island or Massachusetts at this point right now. The State just got

its first HUD grant 3 years ago and the city of Portland just had their second HUD grant renewed. So, we are making strides. Hopefully, there will be a bill in the next legislative session to address universal screening in the State of Maine. We are taking those steps to move forward.

But you posed the question to Mr. Farr and Dr. Lanphear. I think when children and families have paid the price for lead poisoning for all these decades, and now we are talking about taxpayers still pulling the toll here of funding HUD for their lead hazard control program, and I think we are all mindful of the concept of polluter pays. And I think we need to start thinking about steps to holding the lead paint manufacturers to fixing some of our older housing stock here.

Senator REED. Thank you very much.

Thank you all for your testimony very much.

I would like to now call forward the second panel, if they could please take their places.

[Pause.]

Let me now introduce the second panel. The first witness on the panel is Attorney General Sheldon Whitehouse from my own State of Rhode Island. Elected in 1998, Sheldon has focused his efforts on health care, environmental enforcement, crime prevention, and punishing armed criminals. Sheldon previously served as U.S. Attorney for Rhode Island. Before that, his career in Government included positions as Director of Business Regulation and Executive Counsel and Policy Director to Governor Bruce Sundland.

Next, we are joined by Mr. Rick Fatur. Currently, Mr. Fatur is developing Colorado's lead-based paint program for the Colorado Department of Public Health and the Environment. He started the Colorado Lead Coalition and has worked in the environmental field for over 25 years as a chemist, environmental consultant, and instructor for asbestos and lead-based paint classes.

Finally, we are joined by Sue Heller, who has previously been introduced by Senator Dodd, with the highest praise. She currently administers the Manchester Lead Abatement Project in Manchester, Connecticut, supervising abatement of over 110 dwelling units from outreach through construction of these units. Other experiences include directing the $225 million New York City Community Development Block Grant and managing public-private sector projects for the mayor's office.

And we look forward to all of your testimony. We will begin with Attorney General Whitehouse.

Mr. Whitehouse, welcome.

STATEMENT OF SHELDON WHITEHOUSE
ATTORNEY GENERAL FOR THE STATE OF RHODE ISLAND

Mr. WHITEHOUSE. Thank you, Mr. Chairman. It is very nice to see you here.

Rhode Island, as you know, has a serious lead paint problem. And I will begin my testimony by describing the insidious nature of lead paint poisoning, which provides no particular telltales, creates no symptoms ordinarily, and is therefore a particularly dangerous and difficult poison to locate, particularly in an environment

in which there has been substantial misleading discussion about the nature of lead poisoning, suggesting that you have to eat lead paint like potato chips in order to be poisoned.

Families are often not sufficiently enough on the alert to know that their children are being lead-poisoned. And it is certainly not a low-income problem entirely. People who are of some considerable affluence and who take pride in the maintenance of their homes, particularly during renovation periods, can find that their own children have been lead-poisoned.

The Conservation Law Foundation of Massachusetts had identified Rhode Island as the lead poison capital of the United States and both our Democratic general assembly and our Republican governors administration have identified lead as the number-one environmental health issue facing Rhode Island's children.

The rate of lead poisoning of our children in Rhode Island is 2½ times the rest of the United States. In Providence, it is 4 times higher than the rest of the United States. We test the blood of every child entering kindergarten for lead poisoning. Every year, on average, more than 2,000 kids reporting to kindergarten have elevated blood levels.

Against this backdrop of a very real and insidious public health calamity, Rhode Island has been active at the municipal, State and Federal levels.

At the municipal level, the bulk of the response has occurred in the city of Providence, our capital city. The city's primary focus is on providing lead safe, healthy housing, and public education to its residents. Through an experienced lead abatement team, through HUD and National Safe Houses Corporation grants, and through close enforcement coordination with my office and the Department of Health, along with aggressive public outreach to children, parents, schools, families, realtors, homeowners, elevated blood levels in Providence's children have dropped from 38 percent of those entering Providence kindergartens in 1998, to 25 percent of kindergartners today.

At the Federal level, we have pursued Federal grants through HUD and other agencies and worked with Federal officials, primarily HUD, EPA, and the U.S. Attorneys Office. Federal political leaders such as yourself have shown considerable interest and vision.

At the State level, we are addressing lead-poison through a variety of agencies and means. Our Department of Health conducts the blood testing program I have described. In the year 2000, 32,313 children under the age of 6 were tested in Rhode Island. Two thousand eight hundred four of those children had elevated lead levels in their blood. The Department of Health follows up on each case where the child's blood level is 20 milligrams per deciliter or higher, with home inspections and case management.

Our Department of Human Services provides funding and care for low-income residents who experience lead poisoning and require medical treatment. Rhode Island became the first and only State to receive permission from the Healthcare Financing Administration to use Medicaid funds for replacing or repairing windows in homes of lead-poisoned children if landlords or tenants satisfied the eligibility requirements.

My department, the Department of Attorney General, is involved primarily on the enforcement side. When we become aware that a residence contains dangerous levels of lead, usually by a referral from the Department of Health, we take action to require owners and landlords to abate the lead. Landlords are not always willing, so we have repeatedly taken them to court and obtained orders, contempt judgments, and civil penalties to enforce their obligation to abate. For instance, in one case, a judge's contempt order required the landlord to pay civil penalties, find and fund alternative housing for the tenants, and to immediately abate the lead hazards or face raised fines. We have successfully completed 20 such lawsuits. We have approximately 200 cases in the office in process right now, and roughly 100 homes and apartments, including the exterior and the soil that surrounds them, have successfully been abated or are in the process of abatement.

Moreover, the Department of Health reports that they find an entirely new level of cooperation and compliance from landlords when they are given the initial notification now that word is out in the landlord community of our enforcement strategy.

We have referred cases for prosecution to the Department of Justice, HUD, and the EPA to enforce the Federal requirements that landlords and sellers disclose lead hazards to buyers and tenants. We hope that the Federal Government will take a more active role in prosecuting these cases in the future.

In addition to recognizing the efforts of municipal, Federal, and State government, I should take a moment to commend the community organizations that are so active in Rhode Island in this area: Health & Education Leadership for Providence, the Help Lead Safe Center, the Childhood Lead Action Project, Greater Elmwood Neighborhood Services, various neighborhood and church organizations, Head Start, the VNA, and many nonprofit housing groups.

Blood, toil, tears and sweat were Winston Churchill's exemplars of effort. In Rhode Island, the blood is given by infants and small children who must be regularly tested, and in some cases, hospitalized, to have their blood chelated. The tears are shed by family members who discover, often too late, and often despite very reasonable levels of maintenance of their homes, that their child has become lead-poisoned. The toil and sweat comes from the men and women of these community organizations who every day administer to the many needs of families facing these uncertainties.

Everyone in Rhode Island is working to clean up the lead paint mess. Municipal government and thus, municipal taxpayers, are pitching in. State government through many agencies, and thus, State taxpayers, are pitching in. Federal efforts have been made through HUD, the EPA, and the Department of Justice. Volunteers and staff of community organizations are pitching in. Families, of course, bear a terrible share of the burden—the lead poisoning of their children, the worry and woe of mothers and fathers, the displacement of families from their homes, even the minor trauma of holding your child as painful and frightening procedures are performed to test for lead poisoning or to chelate lead out of your child's blood. Even landlords and homeowners are pitching in,

cleaning up lead paint that may have been put on years before they ever bought the home.

Mr. Chairman, there is, only one group not pitching in. And that is the lead pigment companies who sold this toxic material for decades, profited from it, lied about it, and are now trying to evade even the most microscopic share of responsibility for cleaning up the mess they helped to create.

After determining that the pigment companies were prepared to do essentially nothing about this problem, I filed a lawsuit to determine what the fair share of responsibility of these companies is, and to get the companies to contribute that fair share to the remedy of this problem.

The lawsuit was filed on October 12, 1999. The State of Rhode Island is represented by myself and by my office, by a highly regarded law firm which represented the State with great success in litigation that you will remember well, arising out of Rhode Island's 1991 bank failures, and by a national firm which has the depth to withstand the inevitable blizzard of paper occasioned by large-scale civil litigation. As Attorney General, I am directly involved in this case, guide its strategy, and successfully argued the case for the State against the motions to dismiss.

Our allegations fall into three groups. There are equitable counts. There is a statutory count under a Rhode Island State consumer protection statute. And there are a number of traditional tort counts which bear on the properties owned or maintained by Rhode Island in its proprietary capacity. For example, the public nuisance count would enable the Rhode Island Superior Court within its equitable jurisdiction to impose a reasonable order allowing more rapid and complete abatement of lead paint that the State presently has resources to accomplish.

As the Rhode Island General Assembly has noted, "Rhode Island presently does not have the public nor the private resources to handle the total problem."

I should point out that a public nuisance lawsuit, when brought by a responsible public official to vindicate a public harm, is not an ordinary piece of litigation. Its primary purpose is not to resolve a dispute between contending private parties, but rather to protect the public health, safety and welfare. A public nuisance lawsuit is, in some measure, an exercise of the police power of the State.

What remedy do we seek that will relieve Rhode Island children of the hazard of lead paint poisoning? Ideally, all lead paint needs to be removed from residences where children may be exposed. With limited resources, we believe the first priorities are: one, to remove lead from friction surfaces such as doors and windows; two, to assure that repairs and maintenance are done in a way that does not expose residents to lead dust; and three, to encapsulate lead surfaces, since it is lead's inherent, intrinsic nature to chalk and form poisonous dust.

I will conclude my remarks by observing that I am just a small State Attorney General, and this lawsuit has provided me my first experience of national level spin. I will not bore you here with the description of the various characterizations of this lawsuit, characterizations of my motivations, or characterizations of the facts of lead paint poisoning. Suffice it to say that we wish as quickly as

possible to bring this case forward, so that we can present the State's case and the defendants can present theirs, and a decision can be made not on rhetoric, not on spin, but on evidence and facts. We look for the outcome of that process to be a fair and sensible order requiring the defendants to contribute in a fair and sensible way to the clean-up of the mess they made.

If Rhode Island is to be considered the lead paint capitol of the United States, Mr. Chairman, let us also seek to be the capitol of lead paint solutions.

Thank you very much.

Senator REED. Thank you very much, Mr. Whitehouse, for your testimony, also for your leadership.

Now let me call on Mr. Fatur.

Mr. Fatur.

STATEMENT OF RICHARD A. FATUR
ENVIRONMENTAL PROTECTION SPECIALIST
COLORADO DEPARTMENT OF PUBLIC HEALTH
AND THE ENVIRONMENT

Mr. FATUR. Good afternoon, Chairman Reed, and Members of the Subcommittee. My name is Rick Fatur, and I am an Environmental Protection Specialist with the Colorado Department of Public Health and the Environment's Lead-Based Paint Program. I have been asked to testify before your Subcommittee on Colorado's Lead-Based Paint Program.

First, I want to thank you for inviting me to this discussion on State and local lead-based paint programs. I would like to start by giving you a summary and an overview of our State program.

I would say that Colorado is an example of a State with an average childhood lead poisoning problem. We have found that 3 to 4 percent of the children tested have elevated blood lead levels, which is close to the national average. We have identified pockets or areas where 15 to 20 percent of the children have elevated blood lead levels, but we do not seem to have the same problem that some States have where certain cities or areas may have up to 50 percent of the children with elevated blood lead levels.

The only current Colorado State lead-based paint regulation covers the abatement of lead-based paint. Colorado's lead-based paint regulation for abatement is nearly identical in content to the Federal EPA lead-based paint regulation for abatement, with a few minor differences.

The current regulation covers the following items. There are requirements for conducting lead-based paint inspections, risk assessments, and then also abatement projects. In addition, abatement projects have requirements for notification and also submitting a protection plan. They need to be conducted by certified abatement firms using certified workers and supervisors, and are inspected by the State to ensure that proper work method are being used. We also have a compliance section so enforcement actions may be taken for noted violations. We require certification of abatement firms, workers, supervisors, designers, inspectors and risk assessors. And we approve training providers and audit the classes to assure proper content.

Overall, the State regulation is working well. Inspections, risk assessments, and abatements are presently all voluntary activities. I believe lead poisoning could be further reduced if triggers could be introduced requiring these activities be conducted under certain circumstances.

I would now like to address some of the positive aspects of our program.

We are showing an increase in abatement activities/projects, which shows that people are becoming more aware of the problem.

We are also showing an increase in the number of abatement firms, and all personal certifications.

Working "lead-safe," by containing and controlling lead hazards, is becoming a more common-place practice in Colorado.

Since inspections, risk assessments and abatements are voluntary activities, a major part of the program is outreach and education. We developed a Colorado Lead Coalition to help us with these activities and are seeing very good results from its work. Incidentally, the EPA recently honored our Colorado Lead Coalition with an Environmental Achievement Award on October 30.

The members of the coalition include: The Colorado Department of Public Health and the Environment; the Environmental Protection Agency; the Colorado Department of Housing; the Denver Environmental Health; the Denver Housing and Neighborhood Development; the Northeast Denver Housing Center; the Denver Water Board; and the Agency for Toxic Substances and Disease Registry.

The new coalition members that will be joining this year include OSHA, HUD, and the El Paso County Health Department.

The Colorado program for testing children is working well and we continue to see an increase in the number of children being tested. We have begun the process of revising our State regulation to mirror the new EPA regulatory requirements issued in January 2001.

Finally, I would like to discuss some of the problems we have seen, not only within our State, but also nationally.

By far the majority of projects are being done for the purpose of renovation and remodeling, not for abatement. Abatement is the elimination lead-based paint hazards and must be conducted in accordance with existing regulations. HUD requires some training to control lead-based paint hazards during HUD's renovation and remodeling projects, but the vast majority of renovation or remodeling projects are still being done by untrained persons without any control measures.

Again, I believe lead poisoning could be further reduced if triggers could be introduced requiring inspections before renovation and remodeling is permitted, and requiring that risk assessments and abatement be conducted under certain circumstances.

The EPA needs to promulgate their other regulations as quickly as possible to close the present loopholes. These include the regulations covering—renovation and remodeling and buildings, bridges and structures.

One of the most significant problems involving lead-based paint is the lack of funding or financial assistance available for abatement or lead-safe renovation and remodeling.

Although there seems to be enough funding for training, outreach, education and even free training classes, almost no money exists to help the underprivileged families who have lead-poisoned children and have an urgent need for interim controls or abatement to correct lead-based paint hazards in their homes. We should think of ways to focus more immediate attention on this issue.

We will all need to work together to resolve some of these problems in order to reach our Nation's goal of eliminating childhood lead poisoning by the year 2010.

Thank you very much, and I would be glad to respond to any questions you may have. I have also included a rough diagram of the current lead-based paint regulations and how they affect each other, and I would be glad to discuss the diagram if anyone has any questions.

Senator REED. Thank you very much for your testimony. My pronunciation I think is different than your pronunciation.

Mr. FATUR. It is close.

[Laughter.]

Senator REED. Anytime there is an A, I have a problem. So how is your name pronounced?

Mr. FATUR. "Fa-ture."

Senator REED. Fatur. Well, thank you very much, Mr. Fatur, for your testimony and also for your years of effort in this area.

Mr. FATUR. You are welcome.

Senator REED. Thank you so much.

Ms. Heller.

STATEMENT OF SUE HELLER
PROJECT ADMINISTRATOR OF THE
MANCHESTER LEAD ABATEMENT PROJECT
MANCHESTER, CONNECTICUT

Ms. HELLER. I am Sue Heller. I am administrator of LAP, the Manchester, Connecticut Lead Abatement Project.

Thanks to those who direct their own energies and staff work toward lead solutions.

Senator Jack Reed holds the first lead-based paint hearing in 10 years, yet another milestone in his quest to end lead poisoning in our time. What better place to be than in a hearing where rank is accorded to Senator Allard of Leadville. We are all from Leadville today.

Connecticut's lead muse is Senator Christopher Dodd, a champion of children, housing and Medicaid. Senator Joseph Lieberman and our Representative John Larson provide Connecticut with knowledgeable and substantive support.

As a HUD grantee, we appreciate the insightful, effective leadership of David Jacobs. Today, when thoughtful people are preoccupied with national values, security, and other imponderables, it is a comfort to be able to talk about a preventable, soluble problem—childhood lead poisoning.

Over a million Connecticut household units were built before 1978. Five hundred thousand have some lead paint risks and 65,000 suffer real hazards. Children are not adequately screened or tested for blood lead levels, despite pediatric advice and the Medicaid Band-Aid.

Connecticut landlords are obligated to abate when a resident child is poisoned at 20 micrograms per deciliter. No regulation or resource compels correction when a child has a mild elevation.

Poor cash flow in low-income housing and ignorance of effective lead practices deter owner response. Blood lead levels lower than 10, formerly thought safe, seem to be damaging. Poisoning thought irreversible, though, thankfully, is treatable. So prevention, which costs less than abatement, is the cost-effective strategy of choice.

Our State responds to the prevailing lead problems of old housing, ignorance of lead safety, insufficient screening, and a shortage of resources. Training is delivered in lead safety and licensure.

Some jurisdictions have won Federal lead money, but very leaded areas in the State have unsuccessfully competed for scarce grants. The courts aggressively enforce lead orders. Hartford instituted a postal cancellation message and a stamp to command resources and attention recently.

Screening is increasing in some larger cities and the State has two regional treatment centers, each with lead-safe houses.

Manchester, Connecticut, uses its 368 HUD-funded units to pilot innovations and to build local capacity. In moving toward prevention, we have invoked four levels of intervention—lowering average costs in the process from $11,500 to $7,250 per unit. We have developed an economic sector of the construction industry devoted to lead and delivered customized training for thousands. LAP has used lead funds to trigger homeownership for 14 low-income, first-time homeowner-occupants, meeting local community development and housing affordability objectives as abatement money is combined with local rehab.

Senator Dodd recently jump-started a Manchester initiative, Lead Action for Medicaid Primary Prevention (LAMPP). The Senator responded to the opportunity to maximize potential development of Medicaid youngsters by investing in affordable housing.

LAMPP will remediate housing where mildly elevated Medicaid youngsters live. Managed care health providers will refer cases for preventive, cost-effective measures: window repair or replacement, paint stabilization, and grass seeding.

A State-funded pilot at $200,000 a year for 2 years will be matched by funds from lead and housing programs, bonding, Medicaid, private dollars, and if we are persuasive, Federal funds.

LAP has won a national best practice award and a local customer service award for its production, cost effectiveness, prevention, and creativity. But those things are not enough.

What needs to be done? More funds are necessary for prevention to deal proactively with children at risk, while not yet poisoned, and to continue to react to poisoned kids.

Money should be directed at prepoison efforts, like nursery preparation or turn-over strategies, where owners can see the pay-off of low-cost, preemptive measures applied between tenants.

We must screen more, but use the data dynamically to guide remediation, focusing on Medicaid youngsters who are disproportionately at risk.

The Federal Medicaid mandate can be a functional and financial lever. We have to demythologize lead costs and liability by demonstrating low-cost, lead-safe skills. Best practices, new equipment,

relocation techniques, and technical assistance to remodelers. We have to encourage those who can afford to remediate themselves.

Programs like ours can only remediate at present an infinitesimal percent of the real needs. In Manchester, it is 3 percent. With additional dollars, we can satisfy the real demand for assisted abatement and prevention. Early prevention can preclude life-long neurologic impairment of kids, deter costly treatment of poisoned children and their households, and reduce expensive special education and behavioral intervention necessary once a child is poisoned.

We need more funding for a well-managed strategy to ensure quick implementation of compound benefits—healthier children, sounder housing, and improved neighborhoods.

Senator REED. Thank you Ms. Heller, for your testimony.

Thank you all for your excellent testimony.

Let me begin with Ms. Heller, if I could.

Dr. Lanphear testified with great conviction, at least to this person, that the standard is probably too high in terms of assessing the true damage to children. If we were to adopt a lower standard, what impact would that have from your perspective locally on screening remediation, other than the obvious that it will cost more money. Can you flesh out some of the impacts?

Ms. HELLER. I think more sensitive prenatal work—the nursery preparation, attention by public health professionals, and of course, more money for these programs to demonstrate how things can be done to people who cannot afford to do them, as well as to people who can.

Senator REED. And you indicated that in your testimony, with your leadership, and Senator Dodd and others, you have begun to coordinate better the medical establishment and the housing establishment for remediation. You might elaborate on what you have done, but also, an indication if that is common throughout the country or something very rare?

Ms. HELLER. It is fairly rare. We have been very fortunate.

Manchester is an extremely well run community, and while not so affluent, its effective administrative infrastructure masks some of the problems. I think if we could export that spirit of cooperation between health and housing authorities, it would be an extremely valuable tool to use around the country.

We have done it through mutual respect, and it is hard to say what else—lots of work, mutual respect.

Senator REED. Good.

Mr. Fatur, in Colorado, have you been able to link together the housing authorities and health care providers in terms of remediation of the problems in treating the children?

Mr. FATUR. We have to some extent. The main work that we have tried to do is through outreach, through our lead coalition and getting other people involved, and doing outreach activities for different groups, which include health care providers. It is an area where you just need everybody to work together and everybody's support and everyone to get on the same page.

Senator REED. Are your health care professionals and the community leaders also talking about lowering the standard for the threshold?

Mr. FATUR. There is talk about that. But in Colorado, we pretty much are adopting the EPA's regulations as they come out and trying to be not more strict or stringent than they are, even though it might merit it in this case. We really probably would not be able to in Colorado, I do not think, unless EPA or HUD or the rest of the agencies set their standards lower than we could in Colorado if we were to adopt those standards.

Senator REED. You have an interesting perspective. You are there in the locality, working at the State level with communities. Are there any techniques or programs that you find particularly useful that you think should be copied across the country?

Mr. FATUR. Well, I believe the main thing that we have done there is we found that communication really is the key because a lot of it focuses on outreach and education. One of the main things that we have done in Colorado is develop our lead coalition. And you can see that we have a variety of housing environmental agencies, et cetera, there.

We meet once or twice a month for planning activities for the National Child Lead Poisoning Prevention Week. We assist each other with the programs and outreach. We try to focus our outreach activities so that not everybody is focusing on the schools. We can spread it out. We get together and combine and do presentations for different organizations and try to come to an agreement on the different regulations because they may not exactly mirror each other. We try to get the local health departments involved. We have Denver environmental health and El Paso County.

One of the main things that we have done is we are now going to be partnering with the National Coalition for Lead-Safe Kids, which is a national coalition, and we are going to try to bring some of their expertise that they have nationally into Colorado to also help us there. I think they are a great organization and they can help anyone who is trying to develop a coalition in their own State.

Senator REED. Just one question for both Mr. Fatur and Ms. Heller.

I was struck by Mr. Farr's comment that in my own capital city of Providence, they were able to identify one unit that in a series exposed several different children. Do you have that kind of housing data in Colorado that you could identify the units that consistently seem to be a problem? And similarly, in Connecticut?

Mr. FATUR. Not to a great extent. If we have a home that we know we have done a project in and we know there is a lead hazard, then we can start tracking the families that go through there. But, in general, it is not really adequate to do that.

Senator REED. And I would presume also that a treating physician probably would not have access to a database like that, so that when a child walked in, it does not even register that this child is coming from a location that another child might have come in weeks or months before.

Mr. FATUR. Right. Well, one thing that we are really working on and it fits in with what you are talking about, is we had a guest speaker in our coalition meetings from the EPA environmental justice department or section. They are working with us to do some GIS mapping for all the areas in Colorado so we can try to establish that type of information and target areas and even in

homes where we know that there is a problem and try to track those homes.

So, we are working on that now jointly with the EPA environmental justice department.

Senator REED. Ms. Heller, can you comment from your perspective in Connecticut?

Ms. HELLER. In Connecticut, I would say that it does happen. In Manchester, it is very unlikely to happen because we have a highly aggressive coordinated code enforcement team. And that team includes health and housing, as well as code officials. I would say that that is one way that we attack the issue and it is one way that you can join the various disciplines involved in it, along with the availability of the Federal money.

Our lead grant has been very inducive to cooperation because housing and health authorities realize that using the money is going to solve health problems, health code issues, building code issues, and help affordable housing, along with school programs where health and housing are issues. I would say that we have a fairly coordinated effort.

Senator REED. All right.

Mr. Whitehouse, let me commend you for your leadership on these issues and the aggressive way that you have tried to use your enforcement authorities.

And I think one of the issues that came up in the other panel is that we have a lot of statutes on the books, but until they are enforced, they are just on the books. They are not helping kids.

You indicated in your testimony that you have brought about 20 lawsuits against landlords who allowed their properties to fall into disrepair. This is a relatively low number given the number of properties. Can you comment upon your constraints, and also, given your engagement with other attorney generals around the country, the issues that face them in terms of prioritizing and pursuing these types of actions?

Mr. WHITEHOUSE. When we are bringing enforcement actions, we are following up on really two initiatives to locate the cases. One is to follow up on the Department of Health's identification of individual children as already lead-poisoned, and we have a mechanism in place where we have worked out the health care confidentiality problems and we can get access to that information and address the landlords whose houses are responsible for that particular poisoning.

As earlier speakers have said, that sort of thing requires children to being the canaries in the mine, to being the biological indicators, I think Dr. Lanphear said. And that is a very unfortunate way to deal with the public health problem. Another way that we are doing this is with what we call the Nuisance Task Force, which brings together code enforcement, the police departments, and a variety of local officials with our office to highlight what we think are dangerous or offending places.

And it may be that they are offensive primarily for the number of police visits to them more than lead immediately. But you then highlight the major properties and that gives you an opportunity to go out and pursue them. Unlike a murder or a robbery, you do

not always have a victim complaining of the offense. You have to be able to go out and find the situations.

Most attorney generals' offices are not set up with a lead investigative capability. And so, to some extent, we are required either to develop that as we have done and to work with other agencies in order to get that in.

The 20 cases are cases that have actually gone to trial. We have a process, once we are notified by the Department of Health, or once we identify a nuisance property, of bringing in the landlord for a little frank discussion. And very often, we find that the frank discussion solves the problem right away and we then enter into a consent agreement that will solve it, or send them back to the Department of Health for compliance with the existing Department of Health abatement program.

So, to a degree, that 20 represents not all that we have done, but, rather, the top of the pyramid, and below that are the collateral effects of people who did not get that far with us, or indeed, who never need to come to us because the word was out that we were taking this seriously and that landlords would be pursued until the problem was solved.

Senator REED. Now, you also indicated in your testimony, Mr. Whitehouse, that you have made referrals to Federal authorities—EPA, HUD, and to the Federal Attorney's Office. Can you comment upon their capacity, not just Rhode Island, but, again, from your perspective across the country, to follow up on some of these suits?

Mr. WHITEHOUSE. The capacity is obviously not great. They have done at least one lawsuit at the U.S. Attorney's Office that I am aware of. It is a very busy office with a lot of major matters. And in the wake of the events of September 11, and Attorney General Ashcroft's desire to focus the Department of Justice more aggressively on antiterrorism activities, that leave less rather than more for lead paint enforcement.

I think that the primary enforcement will remain at the State level and at the municipal level.

Senator REED. To what extent, could Federal resources and programmatic support help this issue, from your perspective?

Mr. WHITEHOUSE. I think programmatic support would be very valuable. The Federal statutes primarily address the question of notice provided at the time of transfer of a property and whether or not adequate notice under the Federal law was provided.

It has penalties for failure to provide notice, but it is not—unlike nuisance law, which was an ancient common-law doctrine that allows you to get right into that house and to order it cleaned up, the Federal statute more polices the notification rather than the actual public harm that is taking place from lead paint poisoning.

I think the primary focus will remain at the State level, and to the extent that resources could come to departments like mine that are active in this, or would become active if they had resources, I think that would be a wise investment.

Senator REED. Thank you very much.

We have been joined by Senator Carper. Senator, if you would like to make a statement and ask questions, please go ahead.

STATEMENT OF SENATOR THOMAS R. CARPER

Senator CARPER. Mr. Chairman, thank you very much, and to our witnesses, welcome. It is nice to have somebody here from a smaller State than Delaware.

[Laughter.]

There is only one State smaller than ours, but you have more people.

[Laughter.]

We are delighted you all are here and we thank you very much for your testimony.

Senator REED. The question is, do we have more lead? That is the question.

[Laughter.]

Senator CARPER. In Delaware we have tried—and if you will excuse this—we have tried to get the lead out. Senator, when you and I served together in the House of Representatives, Joe Biden and I worked, along with the people who ran public housing in the State of Delaware, an effort to try to eradicate lead paint from our public housing. We did not get it all, but I think we have a whole lot of it eliminated.

At the time, the Administration here in Washington was saying that we should become proactive with respect to lead paint in public housing, especially when kids got sick. And we said, no, that is too late, and what we ought to do is proactive and try to get started on the job before kids became sick and had elevated levels of lead in their blood.

I have a couple of questions, if I could, and maybe I could start with you, Ms. Heller.

I am sorry I missed your testimony. I was called out of the room. Could you just take maybe 60 seconds and share with me a point or two that you would want me to take away from your comments?

Ms. HELLER. We need more money for prevention, as you yourself said, and to demonstrate preventive activities, things like lower cost lead abatement, projects that focus on Medicaid, children who are at risk, and projects that help families to prepare nurseries or help them to do work on their houses, lead-safely.

SENATOR CARPER. Fine. Do you lead the Connecticut Lead Abatement Project? Is that correct?

Ms. HELLER. Excuse me?

Senator CARPER. The Connecticut Lead Abatement Project.

Ms. HELLER. Manchester Connecticut Lead Abatement Project.

Senator CARPER. All right. Fair enough. I understand that you may have some involvement in the private sector in that initiative. And I would just ask, how has the involvement, if there is some of the private sector, in your group's endeavors, how has it impacted the ability of the project to fight lead enforcement?

Ms. HELLER. That is a really good question because I think involving the private sector is one of the keys. Most particularly, to gaining the hearts and minds of people and developing a constituency to actually think of lead as a very important issue.

We do work on customizing training for very many population groups in order to capture their hearts and minds. And I think, as in most of these things, if you first listen and hear the real con-

cerns of the constituencies, you can customize training and programs to meet their needs. So, I would have to say that is it.

Senator CARPER. Fine. Thank you.

Is it Mr. Fatur?

Mr. FATUR. Fatur.

Senator CARPER. Do people ever mispronounce your name?

Senator REED. Constantly.

[Laughter.]

Senator CARPER. I will try not to butcher it too badly. I get called all kinds of things as well.

Mr. FATUR. All right. Well, it is unusual if someone gets it right the first time.

Senator CARPER. I was trying to when you pronounced it.

If I could walk out of here with only one or two points that you have made in your testimony, what would those be?

Mr. FATUR. Well, to kind of summarize, the program in Colorado is working really well. We have developed a lead coalition that I talked about where all the different agencies get together, housing and Federal agencies and health departments and that, to try to get on the same page for solving this problem.

We do have some problems that we have encountered in the State and those I will just run through briefly again.

One is that most of the projects are being done for the purpose of renovation and remodeling and not abatement. Abatement requires that control methods are being used. Renovation and remodeling in HUD's projects requires control methods. But if it is not a HUD project and it is not abatement, 99 percent of the projects are being done without any type of controls. We would like to see that cleared up. The EPA could come out with regulations quicker for the renovation and remodeling sector, would be one solution.

The other solution is we could introduce triggers into our abatement regulation that would require some of these activities before renovation and remodeling, such as inspections, risk assessments, some control type of abatement measures.

And the third is, we have had a real problem in Colorado as far as getting funding for actual abatement work. The HUD lead control hazard grants are really good and really great, but we have only been able to get one in Colorado. And if you are outside the Denver area, there is virtually no help for these people.

Senator CARPER. Good. Thank you very much.

General Whitehouse? How do you like being a General?

[Laughter.]

Mr. WHITEHOUSE. As I tell General Sentrotio, who is head of the Rhode Island National Guard, when he calls me General, the General in attorney general is the general in general store, not the General in General Patton.

[Laughter.]

But attorneys general love to be called General, and so there we are.

Senator CARPER. Lieutenant Governors also like to be called Governor, too.

[Laughter.]

Mr. WHITEHOUSE. Not lieutenant, I know.

[Laughter.]

If I had two points to make, the first would be that lead is a particularly insidious and misunderstood poison, in that it does not show any immediate effect to children, and in that the popular wisdom that you have to be poor and allowing your children to eat lead paint chips the size of potato chips in order for them to suffer, are wrong. In fact, it is dangerous in microscopic levels.

Second, in order to resolve it, I think a lot of different groups and agencies need to be working together. In Rhode Island, many are working together. The one that is absent from the table is the lead pigment companies. And in the absence of their having proposed a meaningful role for themselves in this debate, I think it is encumbent upon us to find judges who will do that for them.

Senator CARPER. Okay. I presume that the industry that you refer to is not going to be testifying today?

Senator REED. We are having a series of hearings, Senator. This is the first about local and State responses. I am sure they will have an opportunity to testify.

Senator CARPER. Good. Refresh my memory. I do not recall. How long has it been since lead paint was outlawed?

Senator REED. In 1978.

Senator CARPER. It has been a while. All right. I think you noted in your testimony that Rhode Island has pursued Federal grants through HUD and maybe other agencies as well. I was just wondering, how has your State used those grants? You may have touched on this and I just missed it. Which programs, in your view, if any of those programs, have proven effective?

Mr. WHITEHOUSE. The Federal grants have primarily gone into the city of Providence, which runs a variety of abatement and education programs. I do not work for the city of Providence and I could not tell you the details about how those are working.

I do know that the support that the HUD grants help to give to the community organizations that are so active on this question is very valuable. But I would consider it a piece of a larger partnership. The community, through community organizations, is really pulling an awful lot of its own weight.

Senator CARPER. Thanks again.

Mr. Chairman, thanks for letting me jump in here with some comments and some questions.

And to our witnesses, thanks for joining us today.

Senator REED. Thank you, Senator Carper.

Thank you, ladies and gentlemen, for your excellent testimony. And as I indicated, this is the first in what I assume will be several hearings. This is a critical issue. It is the number one pediatric health issue in the country and it is something that we can do that is absolutely preventable. And shame on us if we do not.

Thank you very much.

The hearing is adjourned.

[Whereupon, at 4:15 p.m., the hearing was adjourned.]

[Prepared statements supplied for the record follow:]

PREPARED STATEMENT OF SENATOR THOMAS R. CARPER

Mr. Chairman, thank you for holding this hearing on such an important issue. I would like to commend you for your leadership in seeking to eradicate childhood lead poisoning in the United States. I was pleased to cosponsor your resolution, S. Res. 166, designating October 21–27 as "National Childhood Lead Poisoning Prevention Week."

My interest in this issue dates back to my days serving in the House of Representatives. When children living in public housing began to get sick in the 1980's, tests revealed high lead blood levels, indicating lead-based paint as the cause. I worked with Senator Joe Biden to ensure that the Department of Housing and Urban Development pursue preventative, rather than remedial, actions concerning lead-based paint in public housing. HUD preferred a "health" approach, requiring lead removal only after illness or high lead blood levels had already occurred, while Senator Biden and I advocated a "housing" approach, which called for preventative action in all public housing regardless of age of inhabitants or signs of illness.

With nearly one million children affected, childhood lead poisoning continues to pose a very serious environmental hazard to America's children. Childhood lead poisoning is a national health, education, and environmental problem, that disproportionately affects low-income and minority families and the cities with older housing stock.

The good news is that childhood lead poisoning is preventable. As the Department of Housing and Urban Development and the Environmental Protection Agency have recognized, the presence of lead-based paint does not present a risk to children. Hazards result when lead-based paint has been allowed to deteriorate, typically by landlords who do not maintain their properties. Childhood lead poisoning can be prevented if housing, especially houses built before 1950, undergoes maintenance and repairs to make them "lead-safe," at-risk children are tested, and families and others are educated about preventing childhood lead poisoning.

With high-level leadership, adequate Federal funding for HUD, and other lead hazard remediation programs, and attention at the State and local level, this problem can be solved. In Delaware we applied for and received a $2.7 million grant to increase blood screenings and aggressively target problem housing stock. Starting in New Castle county and moving south, we hope to eradicate lead hazards in Delaware homes within 5 years. Mr. Chairman, I support your efforts to increase funding for the lead abatement.

The solution to lead-based paint hazards is practical, primary action now. The way to reduce the hazards is to educate families with young children about the risks, to identify and treat children who have already been exposed to unhealthful levels of lead, and to require property owners to make their properties lead-safe. We need to support State and local government efforts by increasing the profile of the issue and increasing Federal funding of the HUD Lead Hazard Control Programs. And finally, we need Presidential leadership to prioritize and publicize this clearly preventable disease.

I am less certain that litigation is a solution. Former manufactures sold lead paint decades ago when it was lawful. The Federal Government required that lead-based paint be used in Federal buildings, including Federally-funded housing. States and cities followed the Federal Government lead and also required the use of lead paint in their housing codes.

Lead-based residential paint has not been sold for decades, and was banned for residential use by the Federal Government in 1978. Lawsuits or the threat of suits cannot be used to change marketing practices or force stronger warning labels to prevent future exposure to a harmful product, as was the situation with tobacco, because this product is no longer being manufactured. Our primary goal now is to fix the existing problem, and I am not sure litigation is the most effective way to do that.

Mr. Chairman, to solve this problem we need White House leadership and cooperative partnerships with industry, cities, and community-based organizations. Thank you again for holding this hearing. I look forward to the witnesses' testimony today. Their testimony describing State and local solutions to the problem of lead-based paint poisoning, as well as the views of Duke University Professor of Law Walter Dellinger, will be useful as this Subcommittee considers how the Federal Government should respond to this problem. Mr. Chairman, thank you again for holding this hearing; I look forward to working with you to eliminate childhood lead poisoning.

PREPARED STATEMENT OF SUSAN THORNFELDT

DIRECTOR, MAINE LEAD ACTION PROJECT

NOVEMBER 13, 2001

Good morning. Thank you for your efforts to highlight lead poisoning and for giving me the opportunity to share our family's story. I am the mother of a little boy named Sam, who was poisoned by lead. I am the Director of the Maine Lead Action Project and I also serve on the Board of the Alliance To End Childhood Lead Poisoning.

Lead poisoning entered our lives soon after we purchased our 170-year-old home. It is a late 19th Century colonial, nestled in a nice residential, coastal neighborhood in Portland, Maine. My husband and I chose an older home, like many of us do, for its charm, beautifully detailed woodwork, and its stately graciousness. As eager, first-time homeowners, we soon began our much-needed renovations.

What we did not know, until our child became inexplicably ill, was that our home contained lead. We were unaware of the dangers, and the serious, permanent health effects lead could have on our children.

I first became acquainted with the topic of lead poisoning in an article from a very popular parenting book; as a first time mother and voracious reader, I absorbed every bit of information about child development. I came across a half page devoted to childhood lead poisoning, which in a nutshell, explained the rapid rate a child's brain grows from birth to age 6 and the irreparable, cognitive damage lead could do to children. I did not have to read another word, at my urging my son's pediatrician did a lead screen on Sammy and delivered the news that, he indeed had elevated blood lead levels. He was screened much more frequently from 6 months to 2 years old; his levels climbing higher with each visit. This came as a total surprise to my husband and me, because we were now religiously cleaning AND washing Sam's hands and toys much more often. This was quite honestly, the only preventative advice we had received.

I am sure many other parents of lead-poisoned children have heard their own public health department imply, "Go home, feed your child better, watch him more carefully, clean your house, and by the way . . . good luck!" Though it may not be said outright, this is the message that is clearly being delivered. Why are we, as parents, made to feel that we are somehow responsible for the poisoning of our children? Does childhood lead poisoning end with the distribution of brightly colored brochures, frequent hand washings, and ABC's of good nutrition? These are the Band-Aids covering up a much bigger problem—toxic paint lurking in our country's housing.

Sadly, Sam was diagnosed with lead poisoning soon after his second birthday. As a parent, it is heartbreaking knowing that the home you provided for your child was slowly poisoning him everyday. There is no deeper feeling of sadness, frustration and helplessness.

In order to avoid poisoning Sam once again, and endangering our daughter, Alexandra, who had just started crawling, we chose to move out while lead abatement was performed on our home. I cannot emphasize enough the challenge of coping with the stress of caring for a sick child, relocating, and dealing with the financial burden—at times it was unbearable. Looking back, I am not quite sure how we pulled it off.

I now have to believe the worst is behind us, and Sammy will have a happy childhood, and normal, productive school years. But for many children, lead poisoning prevents them from succeeding in school or in life.

Though many other stories may begin much differently than mine—maybe in an apartment in Chicago, on a farm in rural Louisiana or in a home on the West Coast—many of them share a common theme: Our children served as the lead detectors alerting us to the hazards of living in a home contaminated with lead-based paint.

If there is one thing that I have learned from my experiences is that the system set up to protect our children from lead poisoning . . . is, sadly, reactionary.

Screening children for lead in their blood is important to finding and treating sick children. But allowing children to serve as lead-detectors is no solution to the environmental disease of lead poisoning—it is an immoral approach. In fact, health departments' preoccupation with screening children often obscures the need for and deflects resources from finding and fixing hazardous houses.

We can make sure that what happened to my children does not happen to other children. But, to do so, we have to confront the reality of lead poisoning—this is a disease that a child catches from a house.

There is only one real way to protect children from lead poisoning—and that is to prevent and control hazards in children's homes. We need to find the homes with lead-based paint hazards and control those hazards before a child is exposed.

And, as our family's experience proves, educating parents about hand washing, and nutrition and hygiene will not solve this problem. Children do not need to be told to eat their vegetables and wash their hands—they need homes that are safe from lead hazards. What is politely called "parent education" really amounts to passing the buck. Of course, nutrition, hygiene, and housekeeping are beneficial but the fact is that my home was dangerous—and millions of homes across the country are still today dangerous to children, not because of any lapse in parenting, but because the lead industry cared more about making money than safety. Despite the overwhelming evidence of the danger of its product and the availability of safer alternatives, the lead paint manufacturers knowingly marketed a poisonous product for decades.

To add insult to the injury they caused, the paint industry is a big proponent of "parent education." Benjamin Moore congratulates itself on helping communities hold "fun and educational" events about lead poisoning for families. Well, I want Benjamin Moore to know that lead poisoning is no fun.

Children and families have paid the price for the industry's misconduct. Taxpayers have paid the price for the industry's misconduct—hundreds of millions of local, State, and Federal dollars. As a parent and a taxpayer, I am tired of paying. I want to know when the companies that caused this problem are going to help pay for solving this problem.

We as a country *can* protect children from lead poisoning. We know what to do, what solutions work. We have set the national goal of ending this disease by 2010. But solutions cost money. It is time for the lead industry to pay its fair share. And it is time that everyone—communities, Government, and industry—do the job right to eliminate lead poisoning once and for all.

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To Accompany Testimony of:
Susan Thornfeldt, Coordinator, Maine Lead Action Project

Senate Banking Subcommittee on Housing and Transportation
"Lead-Based Paint Poisoning: State and Local Responses"
November 13, 2001
Chairman: The Honorable Jack Reed of Rhode Island

Maine Lead Action Project
130 Highland Street
Portland, ME 04103

Phone: 207-775-5935
Fax: 207-772-7354

227 Massachusetts Avenue, N.E. ◆ Suite 200 ◆ Washington, D.C. 20002 ◆ 202-543-1147
Fax: 202-543-4466 ◆ Email: aeclp@aeclp.org

TURNING THE CORNER ON LEAD-BASEI

BY DON RYAN, MURP

Housing providers and rehab programs need to embrace the new, shorter training in lead-safe work practices for maintenance staff, painters, and remodelers to make lead safety a reality.

Despite substantial progress over the past two decades, lead poisoning remains one of the foremost environmental health hazards facing young children in the United States. Lead poisoning in childhood can have lifelong consequences, including learning disabilities, loss of IQ, attention deficit, and behavior problems. In many low-income neighborhoods with dilapidated older housing, more than one third of preschool children are still poisoned by lead today. Remodeling and renovation projects that inadvertently create lead dust hazards also put middle- and upper-income families' children at risk. No effective medical treatment exists for lead poisoning; the only solution to this preventable disease is to control lead hazards in children's environments.

Lead-based paint is the primary source of high-dose exposures to U.S. children, burdening 38 million housing units built before 1978, according to HUD's year 2000 national survey, and threatening housing affordability as well as children's health. Over the

Don Ryan, MURP, is executive director of the Washington, D.C.-based Alliance to End Childhood Lead Poisoning. He can be reached at 202/543-1147 or via e-mail at dryan@aecfp.org.

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past decade, research and experience in communities across the country have greatly increased understanding of the sources and pathways of lead exposure and demonstrated the effectiveness of various control measures. This recent knowledge calls into question whether the current approach of ceding responsibility for lead safety in housing to a relatively few "lead experts" can achieve the national goal of eliminating childhood lead poisoning by 2010. Many lead poisoning prevention experts and advocates believe that the housing industry also needs to make lead-safe work practices an integral part of regular maintenance, paint repair, and remodeling projects in older properties.

The challenge of lead-based paint

Lead is a heavy metal that is extremely toxic to human organs and systems when ingested or inhaled. Lead-based paint is by far the highest source of lead in children's environments, with some paints sold in the 1930s and 1940s containing as much as 50 percent lead by dry weight or 500,000 parts per million. In contrast, a 400 parts per million standard is frequently used for clearing up lead in soil at Superfund sites. The United States did not ban lead in residential paint until 1978, about 50 years after many other countries enacted regulations. As a result, almost 40 percent of our entire housing stock is burdened by lead-based paint. Properties built before 1950 are much more likely to have lead-based paint, higher concentrations of lead in paint, and lead-based paint on more surfaces.

For decades, lead-based paint in tens of millions of housing units across the country has challenged property owners, health officials, physicians, contractors, lenders, insurers, real estate agents, legislators, and the legal system—not to mention lead-poisoned children, their parents, and teachers. The national approach to lead poisoning has evolved in stages over the last 25 years. It has expanded from treating children with extreme symptoms, to reacting to children found to have elevated blood lead levels, to responding to the presence of lead-based paint, to regulating activities aimed at making properties lead-safe.

In 1992, Congress passed a comprehensive federal lead-poisoning law that focused concerted action on controlling lead hazards with the goal of making all housing lead-safe. Among other things, this law also authorized a categorical lead-hazard control grant program at HUD, directed the overhaul of HUD's lead safety regulations for properties receiving federal funds, directed EPA and the states to establish quality controls on lead inspection and the abatement industry, and required property owners and their agents to disclose information about lead-based paint and lead hazards to prospective buyers and tenants.

Important lessons learned

Since 1992, HUD's Lead Hazard Control Grants Program has helped more than 100 communities around the country gain first-hand experience in dealing with lead-based paint. At the same time, EPA and HUD studies have validated assessment tools and protocols and demonstrated the effectiveness of a range of hazard control strategies. National health surveillance studies, local blood lead screening data, and a recent survey of lead-based paint hazards in housing have deepened the understanding of the problem at hand. This substantial body of research and experience has fundamentally changed our understanding of lead safety in the residential environment and illuminated the following conclusions:

- The risk for lead poisoning varies enormously across the housing stock. Well-maintained properties with intact paint rarely poison a child. On the other hand, properties with extensive deteriorated lead-based paint typically pose immediate hazards to children.
- Visual inspections for signs of paint deterioration are an important lead hazard control tool.
- While lead-based paint is the major source of lead poisoning, lead-contaminated dust is the foremost pathway of exposure and the best predictor of risk. Lead dust settles on floors and other surfaces and gets on children's hands and toys and then in their mouths.
- Lead dust contamination comes from deteriorated lead-based

paint, paint repair and renovation work that disturbs lead-based paint, and lead particles that are tracked in from outdoors. Simple paint repair projects using conventional scraping and sanding techniques can generate high levels of lead dust.

- All those who repair or disturb lead-based paint need to follow safe work practices and control, contain, and clean up lead-contaminated dust.
- Because lead dust can be invisible, dust testing is the only way to be sure that hazards are not left behind to poison a child. Lead dust is measured by wipe samples that environmental laboratories generally analyze at a cost of $5 to $10 per sample.

Calibrating the response to the problem

Because the risk to children living in properties that contain lead-based paint varies enormously, lead-safety tools and delivery systems need to be calibrated to the specifics of the situation. Inevitably, a one-size-fits-all approach will squander resources on properties that pose little or no risk, providing insufficient protection to high-risk properties or delaying their identification and slowing cleanup.

According to HUD's recent national housing survey, 13 million units that contain lead-based paint—about one-third of the lead-burdened stock—pose no lead hazards. The prescription for these units is good maintenance and regular repainting to keep paint intact, and lead-safe work practices to avoid lead dust hazards during remodeling.

This same HUD survey estimates that some 25 million units contain at least one condition meeting established criteria for lead hazards. It is clear, however, that most of these units are not poisoning children. If they were, lead poisoning rates would be far higher.

Based on national health statistics, the Alliance To End Childhood Lead Poisoning estimates that 3 million to 5 million housing units likely pose severe health threats to children. For these highest-risk properties, the challenge is to identify deteriorated paint and lead dust hazards before exposure occurs, greatly expand resources, and target action to make these units safe (or demolish and replace them). For the remaining 20 million or so "moderate-risk" units, the challenge is to safely repair deteriorated paint, take safeguards against lead dust hazards, and improve and maintain property condition through lead-safe rehab and maintenance to prevent more serious lead hazards from developing.

Taking lead safety to scale

The critical question facing the housing and renovation industries is who is going to address lead safety in housing and with what level of training and credentials. Currently, lead safety in housing is a highly specialized field in which a relatively few certified lead experts perform intensive lead abatement in about 20,000 high-risk units each year. Outside of these dedicated abatement projects, lead safety receives little attention, as most of the contractors who perform some 18 million remodeling projects each year in pre-1978 properties may not understand the dangers of lead dust.

Extensive and severe hazards require a certified lead-abatement contractor, but most lead-based paint experts and practitioners—along with the federal government—now agree that lead-safe work practices also need to be integrated into everyday housing activities, including property maintenance, turnover treatments, paint repair, remodeling, renovation, and rehab projects.

HUD and EPA have developed and approved several training courses in lead-safe work practices for maintenance staff, painters, and rehab contractors. HUD is currently subsidizing these courses to make them widely available at little or no cost. While these short courses do not certify trainees as lead experts or abatement contractors, they teach the modest changes in work

FOR ADDITIONAL INFORMATION

- To get a free copy of HUD's *Regulation on Lead-Based Paint Hazards* and HUD's *Interpretive Guidance*, call 800/424-LEAD.
- To read HUD's lead-safety regulation, interpretive guidance, and other current information, visit *www.hud.gov/offices/lead/index.cfm*.
- To identify trainers and training courses for lead-safe work practices, sampling, and other lead services, visit *www.leadlisting.org* or call the Lead Paint Compliance Assistance Center toll-free at 866/483-1012.

practices that are needed to control, contain, and clean up lead dust during maintenance, paint repair, and remodeling work. These developments have set the stage for a shift in approach to integrate lead-safe work practices into painting and remodeling practice.

Lead safety in federally assisted housing

On Sept. 15, 2000, HUD's new lead-safety regulation—as directed by the 1992 federal lead law—replaced the maze of pre-existing requirements related to lead-based paint with requirements tailored to the type, duration, and amount of federal housing assistance. This regulation addresses lead safety in paint repair and rehab work in virtually all pre-1978 residential properties receiving HUD funds. Because much of the country faced a shortage in painters and remodelers who were trained in lead-safe work practices as well as certified in lead disciplines, HUD has offered local governments and states a "transition period" to implement the regulation.

During FY 2001, the department has committed more than $100 million to pay for lead inspections, clearance testing, and to make training in lead-safe work practices widely available at little or no cost. Based on the extension of the transition period for local and state agencies to comply with the rule, HUD now expects full implementation of the rule on Aug. 10, 2001.

To the extent permitted by the statute, HUD's lead-safety regulation allows property owners and responsible agencies alternative approaches for compliance. In most situations, the rule does not mandate lead inspections. The rule's overarching objective is to ensure that peeling paint and its causes are repaired using safe work practices and that lead dust hazards are not left behind. Permanent abatement is required only in limited situations: public housing developments undergoing comprehensive modernization and units receiving more than $25,000 in federal rehabilitation assistance.

> Many lead poisoning prevention experts and advocates believe teaching maintenance staff, painters, and remodelers how to control, contain, and clean up lead dust, as HUD's regulation envisions, is the only way to advance prevention on a broad scale to make lead-safe housing a reality.

The rule's requirements for when to use certified lead experts also are limited. For example, unless abatement is required, contractors doing rehab projects funded by Community Development Block Grants and HOME can meet lead-safety requirements either by having workers trained in lead-safe work practices (a four-to-eight-hour course) or having the project supervisor trained and certified as an abatement supervisor (four days of training).

HUD's regulation places strong emphasis on lead dust controls, including universal requirements for clearance testing after rehab or paint repair projects. Clearance testing provides a low-cost performance-based standard to document that lead dust hazards are not left behind. To expand capacity for clearance testing, EPA created a new one-day "sampling technician" course, and HUD is now subsidizing delivery of this training. Before, only certified lead inspectors and risk assessors could perform clearance testing. Now, sampling technicians certified by a state or supervised by a certified risk assessor or inspector can clear most HUD-funded rehabs after non-abatement work.

Several states now certify sampling technicians or are developing regulations to do so. At press time, New Hampshire, Maine, and Wisconsin certified sampling technicians, and Vermont was working on regulations for certification. Local community development agencies and housing authorities can contract out for clearance testing or train their own staffs and qualify them as "sampling technicians." Housing quality inspectors and code inspectors could also be trained and sample for lead dust hazards when deteriorated paint is identified and after it is repaired.

Rehab threatened

While HUD's regulation sets the stage for integrating lead safety into rehab and paint repair projects, a substantial barrier remains that could significantly discourage federally funded housing rehabilitation. Contrary to the approach envisioned by HUD's rule, some lead-safety regulators are maintaining that most federally funded rehab work, including such commonly performed activities as window replacement, constitutes "lead abatement."

Such state requirements have no basis in federal law or regulation. Apparently, some state regulators believe that requiring abatement contractors to do all rehab work will provide greater protection for children's health.

In fact, requiring the use of certified lead abatement contractors for all rehab projects would usually in

practice disrupt and prolong projects, increase their cost, and reduce the number of units rehabbed in areas with few certified abatement contractors, an unfortunate outcome that would hurt affordable housing and ultimately set back children's health. Many lead poisoning prevention experts and advocates believe teaching maintenance staff, painters, and remodelers how to control, contain, and clean up lead dust, as HUD's regulation envisions, is the only way to advance prevention on a broad scale to make lead-safe housing a reality.

In line with this belief, advocates have called for EPA to join HUD in making clear to state regulatory agencies that classifying rehab work as "lead abatement" is inappropriate and counterproductive. Local governments, housing providers, children's health advocates, and affordable housing advocates can help by educating state regulators about the critical need for efficient systems for rehabilitating affordable housing. In most states, this problem can be solved by interpretive guidance, although a few states may need to revise regulations, and at least one state (Ohio) needs to reform its state law.

Legal liability

Some housing providers and local governments have expressed fears that HUD's lead safety regulation will increase their legal liability. In fact, lead-based paint in housing has posed significant legal liability concerns for decades for rental property owners, housing authorities, and others.

An underlying problem has been lack of clarity about what maintenance practices and lead-safety measures constitute the "standard of care." HUD's lead safety regulation makes explicit the steps that owners

THE COST OF LEAD HAZARD CONTROL IN HUD SUBSIDIZED HOUSING

BY MARCIA SIGAL

Whether or not additional funds are provided, federal law requires that lead hazard control and lead-safety practices must be integrated into the Section 8, Community Development, and HOME programs. Many local housing authorities are concerned that the additional cost of lead hazard safety practices will drive private landlords away from participating in the Section 8 program. HUD's new lead hazard safety regulation, which is required in subsidized housing, is not required in the private sector. HUD has responded by offering to pay for newly required clearance tests, which may encourage a large number of landlords to rent to Section 8 tenants.

Despite previous HUD estimates, the impact of the new HUD regulations on rehab programs such as the Community Development Block Grant or HOME is uncertain. The costs will vary across the country, depending on the supply of certified abatement contractors and other required trained specialists. Some community development agencies estimate the incremental costs of lead-based paint abatement in their large rehabilitation projects will increase total project costs by up to one third. HUD has estimated that the annual incremental cost of lead-related window replacement—a large part of the incremental cost of lead hazard control in the CDBG and HOME programs—will be at least $189 million per year. At this time, however, there are no plans in Congress to set aside these additional funds.

In the FY 2001 appropriations bill, Congress reserved $100 million for the existing Lead Hazard Control Program, which provides funding to more than 100 communities. These communities receive lead hazard control work in the general stock of privately owned and subsidized housing. Many national associations, local governments, and housing or community development agencies are calling on Congress to increase funding in HUD programs to pay for lead hazard control. Housing, children's health, and lead-based paint advocates are combining efforts to inform Congress of the need for increased funding. In the meantime, HUD will be gathering additional data on the costs as the regulations are implemented this year.

Marcia Sigal is a policy analyst at NAHRO. She can be reached at 202/289-3500, ext. 239.

of properties receiving federal assistance need to take and provides a low-cost means of documenting successful completion through clearance testing.

HUD's regulation is an important first step toward making lead-safe painting the national norm, as painters and remodelers who are trained in lead-safe work practices for federally funded work can apply these skills to reduce lead hazards in privately funded projects.

Next steps

There are many ways that the housing, apartment, painting, and remodeling industries can integrate lead safety into standard practice and address the reality of lead-based paint in older housing. Local governments, multifamily housing providers, and trade associations can endorse lead-safe work practices and include performance-based lead-safety criteria in contract specifications.

In addition, agencies and associations can offer free training in lead-safe work practices to rehab contractors, maintenance workers, and in-house staff. These groups can work together with lead poisoning prevention advocates to overcome state regulatory obstacles that threaten rehab and make clearance testing more difficult and costly than necessary.

In the same way, effective collaboration of advocates for affordable housing and children's health could make healthy housing a national priority and win greatly increased resources to subsidize rents and upgrade substandard properties. There are currently pending lawsuits against lead paint manufacturers. Cities and states could secure additional resources and participate in these legal actions. As state and local governments gain experience in implementing HUD's lead-safety regulation, changes to the federal statute may also be needed to ensure lead safety's cost-effective integration into maintenance, paint repair, and rehab on a broad scale. ■

EVOLUTION OF APPROACHES TO LEAD-BASED PAINT IN HOUSING

THEN	NOW
Lead-free housing is the long-term goal.	Make all housing lead-safe now.
Wait until a lead-poisoned child is identified to respond to lead hazards.	Make properties lead-safe in the first place to prevent poisoning.
Lead-based paint is the major cause of childhood lead poisoning.	Lead-based paint is the major source—lead-contaminated dust is the major pathway of children's exposure.
Determining the amount of lead in the paint is critical.	Paint condition is critical. Regular monitoring for paint deterioration is part of good property maintenance.
Take hazard control measures only after a certified lead inspector has identified which surfaces are coated with lead-based paint.	In many cases, it makes sense to assume leaded paint, follow safe work practices, and do "clearance tests" for quality control.
Permanent removal or abatement of lead paint is the only way to guarantee safety.	Calibrate the response to the situation. Target enforcement and subsidies to high-risk, low-income properties.
Lead safety is the exclusive province of certified lead experts and delivered through dedicated, stand-alone projects.	Maintenance staff, painters, and remodelers need to use lead-safe practices; only "abatement" projects require lead experts.
The only training available related to lead-based paint is for certified lead experts.	Four- to eight-hour training courses in lead-safe work practices, approved by HUD and EPA, are widely available at low cost.
Painters and remodelers should "broom sweep" the work area at project's end.	Specialized cleaning methods are critical. Clearance testing is the only way to be sure that lead dust hazards are not left behind.
No common standard of reference clearly establishes the "standard of care" for rental property owners.	HUD's lead-safety regulation establishes clear duties for rental properties receiving federal assistance (24 CFR 35).
No federal standards for what constitutes lead hazards in the residential environment.	EPA standards define dangerous levels of lead in dust, paint, and soil (40 CFR 745).
"Let the buyer beware."	Buyers and tenants have a right to know about lead-based paint and lead hazards.

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Lead-based paint, used before 1978, continues to pose a threat to children.

Flunking the lead test

Many kids still at risk

By Francesca Lyman
SPECIAL TO MSNBC

Sept. 5 — When children enter school, parents have to show proof of immunizations and other standard medical records. But one test — required by some states and preschools — may hold the key to determining a child's lifelong ability to learn.

IT HAS BEEN a long road for Sammy Thornfeldt, 6, who starts school in two days. "He's very excited about going to regular kindergarten," reports his mother, Susan. "We, too, have very high hopes for him."

She wasn't always so hopeful. In preschool her son suffered from so-called "sensory integration disorder," a heightened sensitivity to loud noises, bright lights and other stimuli. Even though Sammy looked perfectly healthy, he was not.

At 6 months of age, with a simple blood test, he had been diagnosed with lead poisoning, which his doctors believe contributed to his later problems. The lead poisoning was traced to the lead-paint covered walls of the 170-year-old building in Portland, Maine, where his family lived.

At first, levels of lead in Sammy's blood measured 21 micrograms per deciliter — twice the level government healthy agencies consider capable of causing irreversible damage to the nervous system if left untreated. Then, after the family had to move and spend $40,000 to remove the lead from the home, it took some 4 1/2 years for the heavy metal to work its way out of his system, says Susan, whose concern about the issue spurred her to found a nonprofit group, the Maine Lead Action Project, dedicated to raising awareness among parents and homeowners.

NOT JUST IN INNER CITIES

"Most people think of this as a poor, inner city, tenement-housing-kind-of-problem, and it is," says Susan, "but it can be just as devastating for people of other backgrounds, living elsewhere."

With a number of families moving back into cities and do-it-yourselfers renovating older homes, many children are at risk for being exposed to dust and flaking chips from old leaded paint, she says. And children in debilitated public or rental housing are still being

exposed in high numbers.

Should your child get the lead test?

Lead poisoning can be hard to spot, either because your child seems healthy or because he shows symptoms similar to other health problems. Get your child tested if:

- you notice these symptoms: vomiting, constipation, stomach ache, excessive crankiness, seizures, anemia or constant fatigue, decreased appetite, sleeplessness
- you suspect he has been exposed to lead in your home or neighborhood, school or day care center, or has siblings or friends who have been exposed or poisoned
- your house dates before 1978, when lead paint was used
- you live in an area where a painted bridge, tower or other older public structure was recently renovated

At the same time, new research suggests that children's IQs decline as blood lead rises, and that neurological development may be damaged at even lower levels than earlier thought.

Long recognized as hazardous, especially to young children, infants and fetuses, lead is poison that affects virtually every system of the body. Essentially, the body mistakes lead for calcium, say researchers. Beethoven's lifelong illness was recently traced, via hair samples, to plumbism, or lead poisoning, though it is not clear what the source (possible a leaded-glass "armonica" instrument).

Despite its hazards, since ancient times, lead has served many uses. Today it is still found in pre-1988 solder used to join copper water pipes, like those first developed by the Romans, who gave the metal the name plumbum (from which words like "plumbing" comes). Lead was also added to gasoline as an anti-knock agent, and spewed out tailpipes for decades.

"Ironically, lead was removed for reasons other than health — and its being a potent neurotoxin," says public health physician and lead specialist Dr. Bruce Lanphear of Children's Hospital Medical Center in Cincinnati, "only after it was shown to destroy catalytic converters and after a successful lawsuit by some smart environmental lawyers."

Lanphear is the author of a study published in 2000 in the journal Public Health Reports which found that lead at very low levels in blood — only 2.5 micrograms per deciliter, one-quarter the current standard — adversely affects reading and math scores. Lanphear concludes that the maximum threshold of 10 micrograms, which he feels is "inadequate to protect children," showed be lowered.

Even though officials at the Centers for Disease Control and Prevention found that blood levels in American children have continued to decline since the late 1970s, there are still some 900,000 children with dangerous levels of lead in their bloodstream.

Are you exposed to lead?

Many factors expose infants, children and adults to dangerous amounts of lead. Here are some of the most common:

- Lead-based paint, used before 1978, and dust and chips from home renovations. Check windows, cupboards, doors, porches and outdoor surfaces.
- Marine paint, still sold with lead in it.
- Lead "hot spots" from nearby industrial facilities such as smelters, mines.
- Living near heavy traffic and road areas.
- Drinking water from leaded pipes and faucets made before 1988, when these were banned. When drinking water from a tap, to avoid water that has been sitting in a lead pip, let water run for 1 to 3 minutes before drinking; buy a water filter that can screen out lead; if you can't afford a good filter and have an infant or child, buy bottled water certified to be lead-free.
- Hobbies that expose people to lead such as antique refinishing, jewelry making, boat building and repair.
- Water boiled in leaded pots and pans.
- Miscellaneous: candles with leaded wicks, ceramics with lead glazes.

"The decline in blood lead levels is good news," says Lanphear, "but thousands of children remain exposed and there is increasing evidence that lead is harmful at extremely low levels. There is still much work to be done."

In the United States, lead lingers in the air, water and food, from various sources. Since the metal was taken out of gasoline in the 1970s, emissions have dropped from 20,100 tons in 1985 to 4,900 tons in 1993, according to government figures. But it is still found in materials from old water pipes to ceramics. It was recently found is the dust ground from lead weights used to balance motor vehicle wheels.

Generally, though, leaded paint is still the biggest source of lead in our environment — with one estimate being that 3 million tons of lead still hangs on the walls of U.S. homes.

SCREENING TESTS

Not every child is a candidate for a lead test. CDC used to recommend universal lead screening but has recently backed off, as the numbers of lead-poisoned

individuals have dropped; it is targeting children at highest risk instead.

By law, only children on Medicaid have to be tested, says Anne Guthrie of the Alliance to End Childhood Lead Poisoning. Some states, such as Rhode Island, Massachusetts, Delaware and New Jersey, require lead screening as a condition of getting into a school or licensed preschool facility, she adds, but most do not.

Most states recommend testing if people are at risk — i.e., if they live in homes built before 1978 or "remodels" with chipping or peeling paint. CDC recommends that parents begin testing their child at age 1, and continue testing on every birthday at least through age 3 — longer if lead poisoning is found.

That test can be crucial, as Susan Thornfeldt found. Since she didn't fit the typical urban profile, she didn't realize that her family might be affected. She had to change pediatricians to even get her child tested.

"Sammy had some stomach aches and crankiness out of the norm," recalls Susan, who asked her pediatrician to administer a lead screen. "But our doctor didn't think it was necessary and said, 'Why put your kid through that?' "

After changing pediatricians, she fortunately caught the problem early enough to limit the potentially ruinous long-term effects on her son and younger daughter, Alexandra: stunted growth, learning disabilities, impaired hearing and even brain damage.

"We now think he is right on track developmentally," she says proudly. "Cognitively he's a smart little guy."

Francesca Lyman is an environmental and travel journalist and editor of the American Museum of Natural History book, "Inside the Dzanga-Sangha Rain Forest" (Workman, 1998).

PREPARED STATEMENT OF BRUCE P. LANPHEAR, MD, MPH

ASSOCIATE PROFESSOR OF PEDIATRICS, CHILDREN'S HOSPITAL MEDICAL CENTER
CINCINNATI, OHIO

NOVEMBER 13, 2001

I am an employee of Children's Hospital Medical Center of Cincinnati, Ohio. I am acting on behalf of the children of the United States.

A Rationale and Strategy for the Primary Prevention of Subclinical Lead Toxicity

Subclinical lead toxicity, defined as a blood lead level of 10 μg/dL or higher, was estimated to affect 1 in every 20 children in the United States. [1] The preponderance of experimental and human studies demonstrate serious deleterious and irreversible effects of low-level lead exposure on brain function, such as lowered intelligence and diminished school performance, especially from exposures that occur in early life. [2] Collectively, the results of these studies argue that efforts to prevent neurocognitive impairment associated with lead exposure should emphasize primary prevention—the elimination of residential lead hazards before a child is unduly exposed. This contrasts, paradoxically, with current practices and policies that rely almost exclusively on secondary prevention efforts—attempts to reduce a child's exposure to residential lead hazards only after a child has been unduly exposed. Despite an abundance of recommendations about how to prevent children's exposure to residential lead hazards, there is a paucity of data demonstrating the safety or benefits of these recommended controls for children with blood lead levels below 25 μg/dL. [3]

Although the mechanisms by which lead causes its toxic effects remain unknown, substantial progress has been made in reducing widespread lead exposure. During the past two decades, average blood lead levels in U.S. children have fallen by over 90 percent, due largely to the elimination of lead from gasoline, dietary sources (for example, lead-soldered canned foods and beverages), and residential lead-based paint. [3, 5] It is estimated that 890,000 (4.4 percent) preschool children in the United States have a blood lead of 10 μg/dL or higher. [1]. But in some cities, especially in the northeastern and midwestern United States, over 35 percent of preschool children have blood lead levels exceeding 10 μg/dL from exposure to residential lead hazards. [6]

Prior to 1970, lead poisoning was defined by blood lead greater than 60 μg/dL, a level often associated with acute symptomatic disease—including abdominal colic, frank anemia, encephalopathy or death. Since then, the threshold for defining elevated blood lead levels has gradually been reduced. In 1991, CDC reduced the threshold even further, to 10 μg/dL. [4] These ongoing reductions in the acceptable levels of children's blood lead were the result of evidence indicating that blood lead levels as low as 10 μg/dL were associated with adverse effects in children, such as lowered intelligence, hearing deficits and growth retardation. [2]

Although blood lead concentrations below 10 μg/dL are often considered typical or "normal" for children, contemporary levels of childhood lead exposure remain exceedingly high compared with that of pre-industrial humans. [7] Indeed, there is increasing evidence that lead-associated cognitive deficits occur at blood lead lower than 5 μg/dL. [8] Collectively, the results of existing research argue for a reduction in blood lead levels that are considered "acceptable"—from 10 μg/dL to 5 μg/dL or lower. They also argue for a shift toward the primary prevention of childhood lead exposure, which contrasts sharply with current efforts that rely almost exclusively on case management of children with elevated blood lead levels. [3]

FROM SCREENING CHILDREN TO HOUSING

Universal screening of children for elevated blood lead levels in the United States is controversial. Elevations in children's blood lead level are unevenly distributed in the U.S. population—varying by child's age, poverty level, race, and condition and age of housing. [1, 6] Due to the focal distribution of lead exposure, few children are identified as having an elevated blood lead level in some communities. Thus, some pediatricians and public health officials are hesitant or vigorously oppose universal screening. There is no question, however, that because lead exposure is cumulative and its detrimental effects irreversible, [9] any strategy that is limited to screening children after an exposure has occurred is flawed. [3]

Thus, there continues to be a need to refine screening strategies to target and identify children with undue lead exposure. [10] But it is more critical to develop a strategy and expand our efforts to identify and eliminate residential lead hazards before children are unduly exposed.

RESIDENTIAL SOURCES OF LEAD EXPOSURE

Paint is the major source of childhood lead poisoning in the United States. Children with blood lead above 55 μg/dL are more likely to have paint chips observable on abdominal radiographs and the majority of preschool children with blood lead over 25 μg/dL are reported to put paint chips in their mouths. [11] In contrast, house dust contaminated with lead from deteriorated paint and soil is the primary source of lead ingestion for children with blood lead between 10 μg/dL and 25 μg/dL. [12] Over 95 percent of U.S. children who have elevations in blood lead fall within this range. [1]

RESIDENTIAL STANDARDS: KEY TO PREVENTION

Under Section 403 of Title X, the U.S. Congress mandated the Environmental Protection Agency (EPA) to promulgate health-based lead standards and post-abatement clearance testing for house dust and residential soil. Standards are necessary for screening high-risk housing to identify lead hazards prior to occupancy and before a child is unduly exposed. Residential standards are also critical to identify and eliminate lead hazards for children who already have elevated blood lead levels; major sources of lead will be neglected if dust and soil testing are not routinely done. Finally, standards serve as a benchmark to compare the effectiveness and duration of various lead hazard controls. But if standards remain voluntary, they will not be used nor will they protect children from undue lead exposure.

EPA defines their level of statutory concern as between 1 percent to 5 percent probability of a child having a blood lead level in excess of 10 μg/dL. Scientists have estimated, from epidemiologic data, that 5 percent of children will have a blood lead level ≥10 μg/dL at a floor lead level of 5 μg/ft^2—a value almost 10 times lower than the proposed EPA floor standard. [13] At a floor standard of 50 μg/ft^2, 20 percent of children are estimated to have a blood lead level ≥10 μg/dL. [13] Children who are exposed to floor dust lead levels ≥25 μg/ft^2 are at 8 times higher risk of having blood lead levels ≥10 μg/dL compared with those exposed to levels below 2.5 μg/ft^2. [13] Thus, the floor standard promulgated by EPA is inconsistent with their definition of blood lead levels that "pose a threat" and does not adequately protect children.

HAZARDS OF LEAD HAZARD CONTROLS

Lead poisoning is often regarded as a preventable disease. In practice, however, the safety and benefits of measures intended to control or reduce residential lead hazards are uncertain. Interventions to prevent or control childhood lead exposure (called lead hazard controls) have far too often been shown to result in an increase in children's blood lead levels. [14] There is some evidence that lead hazard controls, including paint deleading or abatement and stabilization of painted surfaces, can reduce lead exposure for children who have blood lead levels ≥30 μg/dL. [15] In contrast, it is uncertain if lead hazard controls are safe or beneficial for children who have lower blood lead levels. Indeed, paint abatement has been shown to cause a rise in children's blood lead levels. [16] Presumably, this rise in blood lead levels is due to lead contamination from removal or scraping of leaded paint. [17] It is likely that lead hazards caused by lead hazard controls or renovation can be eliminated by promulgating effective health-based dust standards and requiring that clearance tests are conducted after any renovation or abatement is complete. But clearance tests or residential lead standards must be empirically derived and protect children from undue lead exposure, as measured by blood lead levels.

The costs to prevent childhood lead poisoning from residential hazards are very substantial. It has been estimated, for example, that the first year cost to reduce residential lead hazards in Federally-owned or Federally-assisted housing is $458 million. HUD has estimated the overall benefit, defined as increase in lifetime earnings of children who are protected from the detrimental effects of lead exposure, was $1.538 billion—a net benefit of $1.08 billion. [18] This estimate does not, however, include recent findings indicating that the drop in IQ is greater for each 1 μg/dL increase in blood lead at levels below 10 μg/dL. [19] Nor does it include other anticipated benefits, such as reductions in cardiovascular disease, tooth decay and delinquent behaviors. [20]

OTHER RESIDENTIAL HAZARDS

Lead poisoning in childhood is only one of several indicators of our failure to protect children from residential hazards. Children's health is a function of their home environment. If residential hazards were eliminated, morbidity and mortality among children in the United States would decline dramatically. Moreover, many of the racial and socioeconomic disparities in children's health would be reduced.

Injuries, including falls, ingestion, and burn injuries, are the major causes of morbidity and mortality in children. Over 50 percent of fatal and nonfatal injuries in childhood occur in children's homes. [21] Environmental tobacco smoke competes with injuries as the leading cause of disease in U.S. children. [22] Over 43 percent of U.S. children are exposed to environmental tobacco smoke in their homes, leading to a dramatic excess of asthma and respiratory illness. [23] Asthma, the most common chronic disease of childhood, is intimately linked to residential exposures of indoor allergens and pollutants. [23–24] Indeed, it has been estimated that over 40 percent of doctor-diagnosed asthma in children under 16 years is attributable to residential exposures. [23–24] In the past 2 decades, asthma rates doubled in U.S. children. [25] Finally, a number of agents encountered in housing, including pesticides, have been linked to detrimental effects in children. [26] Thus, it is clear that residential hazards are critical determinants of children's health.

Childhood exposures to residential hazards are antecedents for diseases in adulthood. The detrimental effects of low-level lead exposure on intelligence are irreversible and dramatically reduce opportunities and increase racial inequality. [2, 20] Lead poisoning is also associated with cardiovascular disease, premature live births, delinquent behaviors, and an increased mortality from all causes. [27] Similarly, exposures to indoor allergens during early childhood are critical for the development of asthma and the consequences of childhood asthma persist throughout life. [28] Racial and socioeconomic disparities in environmentally induced diseases, already apparent in childhood, are pronounced. [1, 6, 13, 29] Collectively, these data indicate that to protect children from the major causes of morbidity and mortality, it is critical to develop health policy focusing on the control of residential hazards. Many of the strategies and tools that are necessary to protect children from undue lead exposure are relevant to other residential hazards.

A Strategy for the Primary Prevention of Lead Poisoning

A comprehensive strategy for the primary prevention of childhood lead poisoning should include several components.

Empirically-Based Residential Lead Standards

Promulgation of empirically-derived, health-based residential lead standards are essential. The lead dust standards would be used to screen housing before a child is unduly exposed, and after lead hazard controls or renovation. [8] These standards must be empirically-derived and they must be enforced. Voluntary "standards" are unlikely to protect the majority of children from undue lead exposure.

Screening housing units by using dust samples should be incorporated into housing codes. Dust sampling should be required prior to approval of Federal subsidizes for housing. Exceptions could be made for housing units that have been shown to be free of lead-based paint. Screening could be targeted to rental housing because the majority of children who have blood lead levels of 10 μg/dL or higher reside in rental housing.

Studies to assess the ability of individuals who have taken 1 day training programs to accurately measure lead-contaminated house dust are needed. Ongoing research is testing the ability of families to conduct dust sampling for lead. These research projects are essential to make what is generally regarded as the single most important tool to identify housing units that contain lead hazards (for example, dust wipe samples) more widely available.

Strategy to Identify and Target Residential Lead Hazards

National, State, and community surveys of housing need to be conducted to identify and prioritize the elimination of residential lead hazards. There should be plans for the identification and remediation of lead-contaminated housing. There should also be plans for the gradual elimination of lead hazards during renovation or demolition of older housing.

Studies to Prove Lead Hazard Controls Protect Children

Once residential hazards are identified, it is essential to have safe and effective methods to eliminate them. Although there is good evidence that lead abatement or lead hazard controls are effective in reducing exposure for children who have blood lead levels over 25 μg/dL, there is limited evidence that existing lead hazard controls are safe or efficacious for children with blood lead levels below 25 μg/dL. Evidence of their safety and efficacy must initially rely on children's blood lead levels. Thereafter, dust lead levels and other environmental measures could be used to evaluate various lead hazard controls. Lead hazard controls need to be assessed in trials that are experimental in design or, at a minimum, include a control group to account for potential confounding variables, such as seasonal variation and the typical decline in children's blood lead levels as they mature.

An expert committee convened by the National Academy of Sciences should be asked to critically examine what is known about the safety and efficacy of existing lead hazard controls. Specific components of lead hazard controls, such as wet versus dry scraping to remove leaded paint, should be tested. Too often, we have relied on expert opinion about what is safe or effective. These methods can and should be tested in randomized trials. Lower cost interventions should be compared with full abatement in controlled trials.

Various strategies that are ultimately shown to be safe and effective in preventing lead exposure should be allowed. Owners or landlords can then make larger investments for longer term benefits (full abatement) and smaller investments that require ongoing maintenance (lower cost lead hazard controls). This will provide flexibility for housing units with lower and higher value.

Scientific Advisory Committee to HUD

A Scientific Advisory Committee should be established to advise the Director of the Office of Lead Hazard Control and Healthy Home Initiative in the U.S. Department of Housing and Urban Development. This Committee would advise the Director about research that is necessary to protect children from residential lead hazards, including lead poisoning, asthma, and residential injuries.

Funds to conduct research to improve our understanding of and control efforts for residential hazards (asthma, injuries and lead exposure) should be expanded. These funds should specifically target housing factors related to residentially-induced diseases and be designated to the Centers for Disease Control and U.S. Department of Housing and Urban Development. These funds should be no less than $100 million annually.

Establish National Institute for Safe Housing

A national institute for the study and control of housing-related morbidity and mortality in children is needed. This institute should conduct research to understand and control residentially-induced diseases in children. It should maintain surveillance for residentially-induced diseases. It should assess the science underlying standards or recommendations for residential hazards from the CDC, EPA or HUD. It should coordinate efforts of these and other agencies to ensure that vital public health research is conducted.

The research conducted by this institute should adhere to the principle that passive controls (for example, efforts that do not require modifying individuals' behaviors) are the most effective ways to eliminate residentially-induced diseases. For too long, we have simply passed out brochures or told mothers to "clean their houses better" to reduce their child's risk of lead poisoning. Educational efforts or dust control are inadequate unless lead-based paint is made inaccessible.

This institute should have funds to conduct research and to make awards to universities, public health and housing agencies, and other entities for the purpose of understanding and controlling residentially-induced diseases in children.

SUMMARY

The current lead poisoning prevention strategy largely ignores existing scientific evidence indicating that our efforts should emphasize primary prevention. Most Federal agencies involved in lead poisoning prevention acknowledge that primary prevention is preferable, yet our efforts continue to focus on screening children for elevated blood lead levels and controlling lead hazards only after a child has been unduly exposed. It is time to establish a scientifically-based strategy to eliminate subclinical lead toxicity by controlling residential lead hazards; it is within our grasp.

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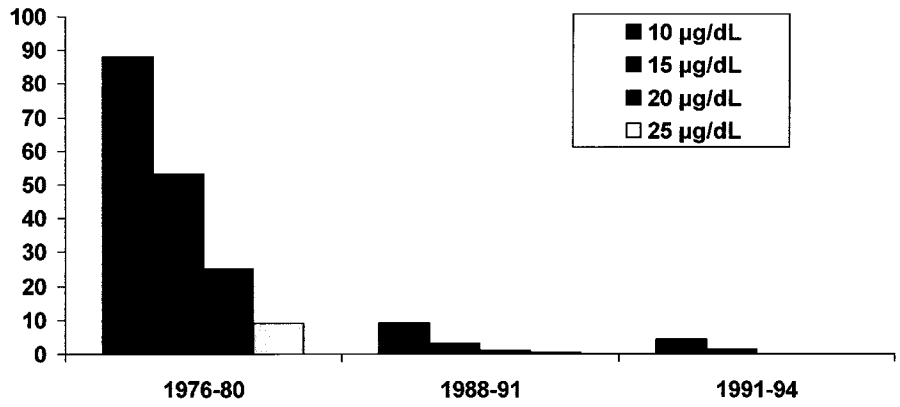
Evolution of a Disease

The Science of Childhood Lead Exposure Prevention

Evolution of a Disease

- Recognition of acute disease
- Elucidation of disease spectrum and mechanisms of exposure
- Prevention and control of exposure

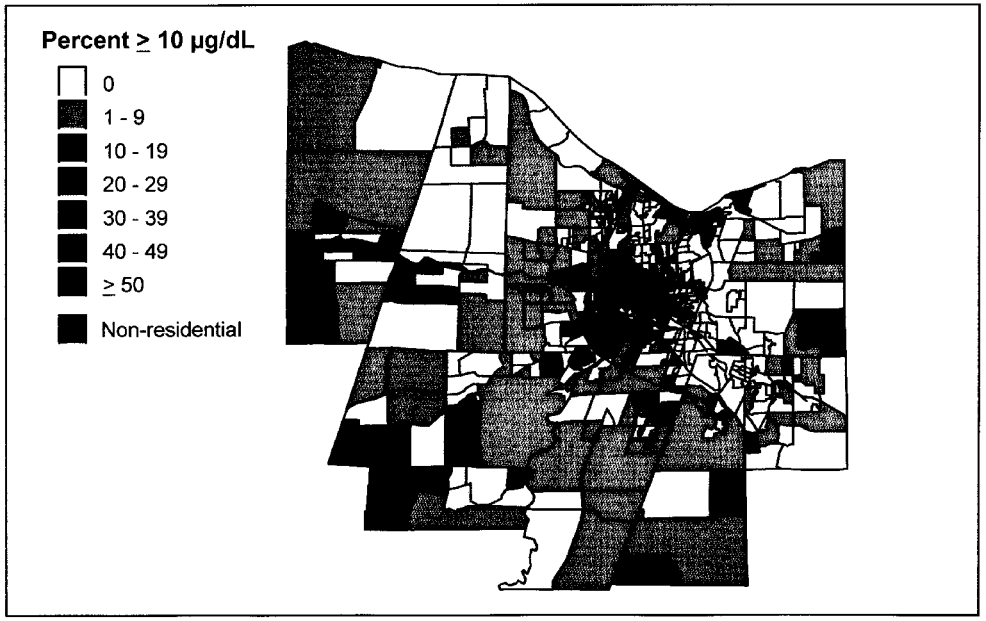
Percent of Preschool Children Exceeding Selected Blood Lead Levels, NHANES II - III



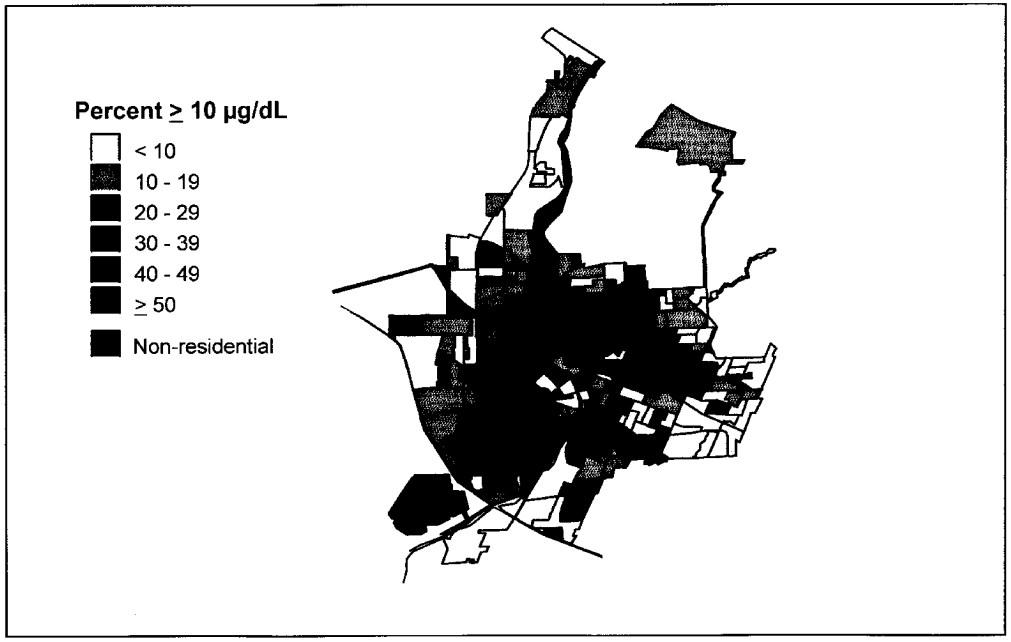
Subclinical Lead Toxicity - Still A Major Public Health Problem

- Subclinical lead toxicity remains epidemic in many parts of United States.
- Systemic toxin associated with numerous adverse conditions and diseases in humans.
- No magic “medical” bullet.
- Major environmental justice problem.
- Evidence of adverse effects below 10 μg/dL.

Elevated Blood Lead (≥ 10 µg/dL) in 20,296 Children, Monroe County, NY, 1994 - 1995



Elevated Blood Lead Levels (≥ 10 µg/dL) in 14,229 Children, Rochester, NY, 1994 - 1995

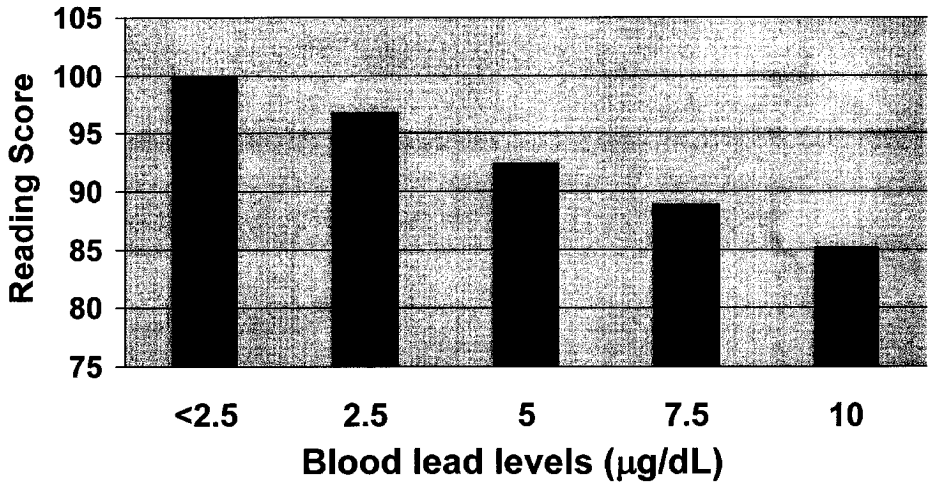


Estimated Annual Benefit of a 1 μg/dL Reduction in Blood Lead Levels

- 635,000 Fewer Persons with HTN
- 3200 Fewer Myocardial Infarctions
- 1300 Fewer Strokes
- 3300 Fewer Deaths

Schwartz, Env Res,1994:66;105-124

Blood lead concentration and mean reading scores, U.S. children and adolescents



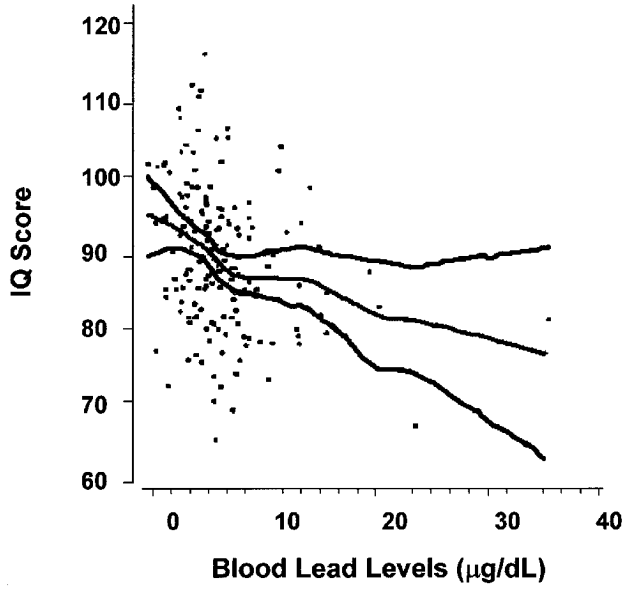
Reading decrements for a 1 μg/dL increase in blood lead concentration

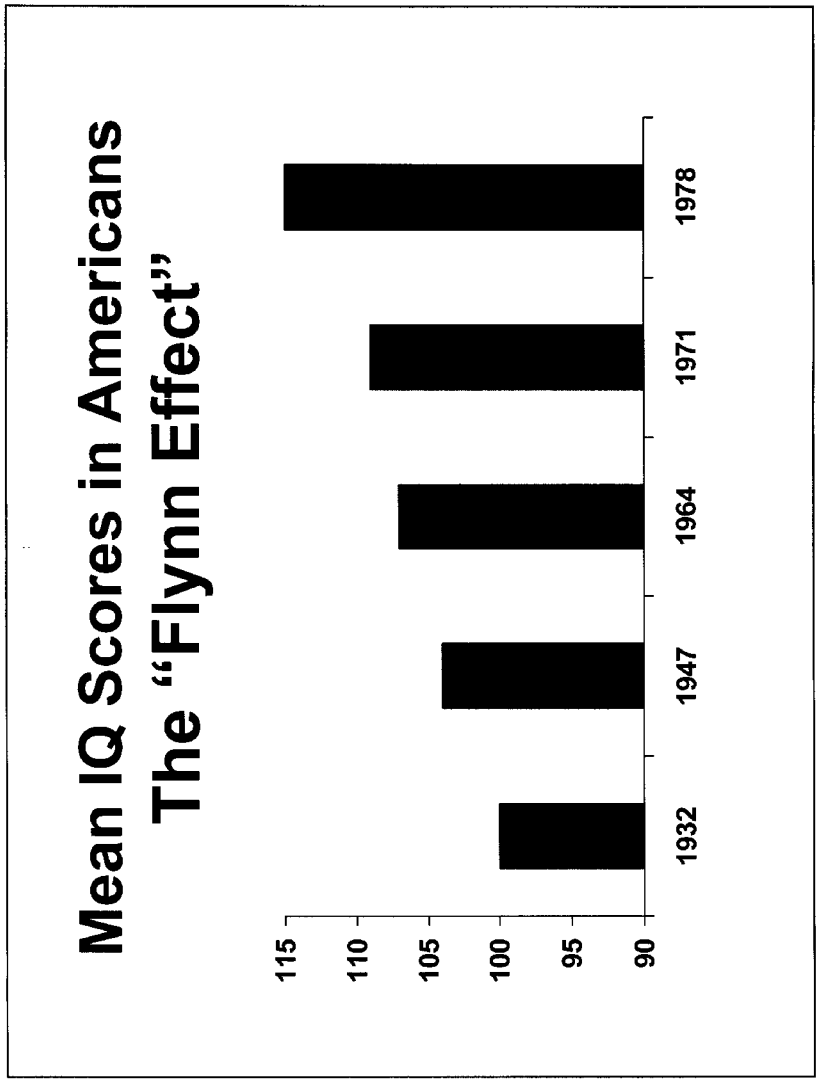
Reading Test	*No.*	*Adjusted*	*p value*
Total Sample	4,853	- .99 ± .19	.001
< 10 μg/dL	4,681	-1.44 ± .30	.001
< 7.5 μg/dL	4,526	-1.53 ± .31	.001
< 5 μg/dL	4,034	-1.66 ± .36	.001
< 2.5 μg/dL	2,467	-1.71 ± .93	.07

Mean Adjusted Change in IQ Score per 1 μg/dL Increase in Blood Lead, by Blood Lead Status at 60 Months of Age

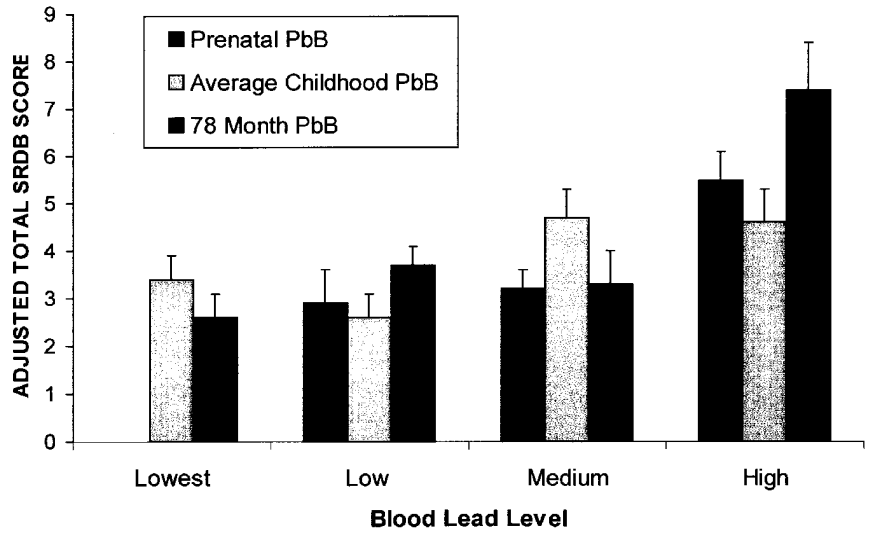
Sample	*No.*	*Adjusted Estimate*	*p value*
Total Sample	163	-.57 ± .16	.001
< 10 μg/dl	140	-1.15 ± .39	.005
< 5 μg/dl	83	-1.56 ± 1.2	.202

Association of IQ and Children's Blood Lead Levels at 60-months of Age




Mean IQ Scores in Americans
The "Flynn Effect"
115
110
105
100
95
90
1932
1947
1964
1971
1978

Association of Blood Lead Levels and Delinquency in Adolescents



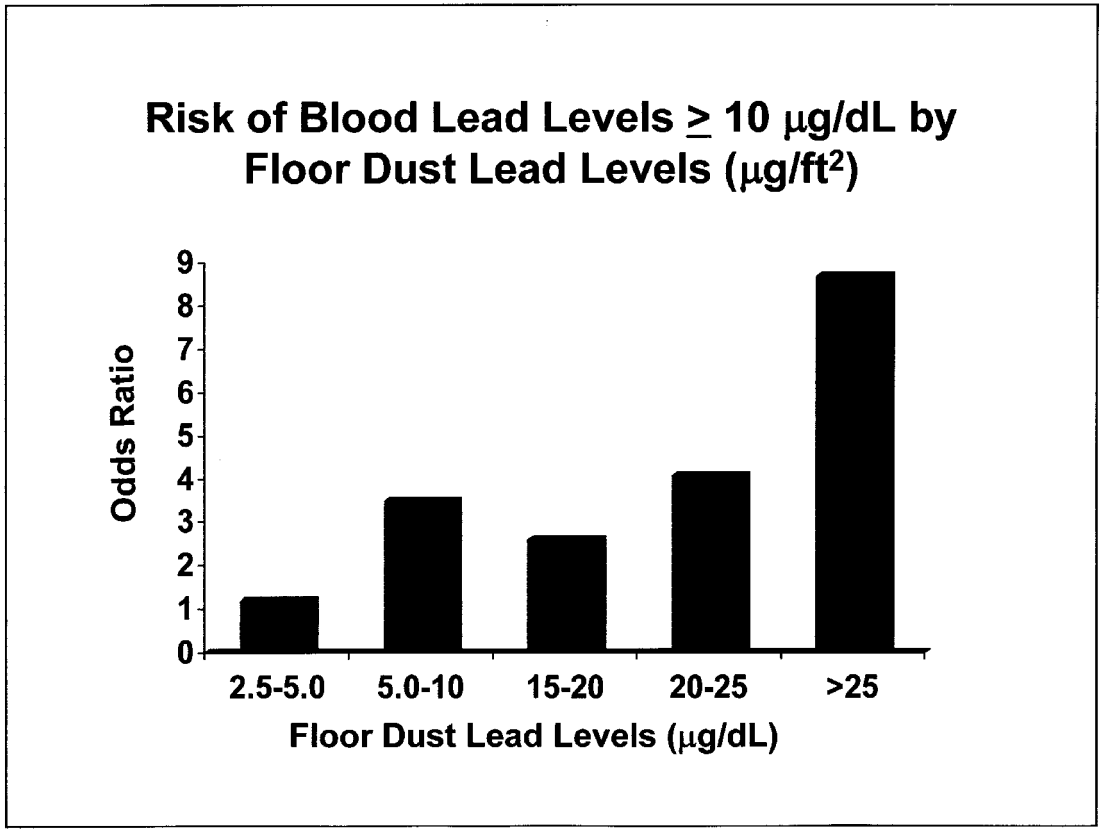
Dietrich KN, et al (in press)

Levels of Prevention

- Primary
- Secondary
- Tertiary

Steps toward Primary Prevention

- Identify neighborhoods and housing with residential lead hazards.
- Targeted screening of housing.
- Screening children as a safety net.
- Test safety and effectiveness of low-cost environmental interventions.


Risk of Blood Lead Levels ≥ 10 μg/dL by
Floor Dust Lead Levels (μg/ft²)
Odds Ratio
0
1
2
3
4
5
6
7
8
9
2.5-5.0
5.0-10
15-20
20-25
>25
Floor Dust Lead Levels (μg/dL)

Implications For Prevention

- Emphasis needs to to shift from screening children to screening houses.
- Scientifically based health-based standard for lead-contaminated house dust is needed.
- Randomized trials to assess whether lead hazard controls are effective in preventing exposure, as measured by blood lead levels.

"Until effective standards for the domestic environment are devised, it is likely that children will continue to be employed as biological indicators of substandard housing."

Donald Barltrop, 1974

PREPARED STATEMENT OF NICK FARR

EXECUTIVE DIRECTOR
NATIONAL CENTER FOR LEAD-SAFE HOUSING

NOVEMBER 13, 2001

Nick Farr is the Executive Director of the National Center for Lead-Safe Housing, a Maryland nonprofit corporation. The Center's mission is to help sharply reduce childhood lead poisoning while preserving the Nation's stock of affordable housing. It developed the Department of Housing and Urban Development's Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing and is evaluating the cost and effectiveness of the lead hazard control strategies of State and local recipients of HUD's lead hazard control grants. The Center has carried out a number of research projects in lead hazard control and provided training and technical assistance to cities and nonprofit organizations in developing and carrying out lead hazard control programs.

Childhood Lead Poisoning

Childhood lead poisoning is still the number one environmental disease of children. According to estimates of the Centers for Disease Control and Prevention almost 900,000 children have lead in their blood at or above 10 micrograms per deciliter, the official level of concern. These children are likely to suffer from a lowering of their IQ's and their attention spans, leading to poor school performance, reduced job related capacity and increased adolescent delinquency. Recent research suggests that blood lead levels well below 10 micrograms per deciliter are also associated with these problems. So the number of children in harms way could be in the millions. Since African-American children are five times as likely to be poisoned than white children, childhood lead poisoning is also a major environmental justice problem.

The vast majority of children who have elevated blood lead levels became ill by ingesting lead from deteriorated paint in household dust or contaminated soil in normal play activities. Young children play on floors, at windows or in their yards. Their hands and toys become contaminated from lead in dust on the floor, windowsills and window wells and in bare soil. They put their hands and toys in their mouths and ingest tiny but dangerous amounts of lead. Some of that lead lodges in their brains and central nervous system disrupting normal neurological development and causing the IQ and attention span decrements described above.

Once the lead has affected the brain and central nervous system, the damage is permanent and irreversible. Medical treatment can reduce the amount of lead in children's blood at high levels, but recent research has confirmed that this medical treatment does not reverse past brain damage. Therefore, the only moral and effective way to deal with childhood lead poisoning is to prevent children from being exposed to lead in the first place.

Lead Hazards in Housing

Most children with elevated blood lead levels are exposed to lead because they live in older, poorly maintained housing containing lead-based paint. Other children are exposed when their older homes are renovated or remodeled and the contractors fail to follow lead safe work practices to control, contain and clean up lead contaminated dust generated whenever lead-based painted surfaces are disturbed.

According to the recently completed HUD National Survey of Lead and Allergens in Housing, some 38 million homes in the United States have lead-based paint somewhere in the building. Over 25 million homes have significant lead-based paint hazards. Lead-based paint hazards include:

- Flaking or peeling lead-based paint.
- Lead-based paint on friction or impact surfaces, such as windows and doors.
- Lead-based paint on chewable surfaces, such as window sills.
- Excessive levels of lead in dust on floors or window sills.
- Lead contaminated soil.

Housing in which all paint is intact is not hazardous. As long as the house is well maintained and as long as renovators and maintenance workers follow lead lead-safe work practices whenever they disturb lead-based paint, housing with intact paint will continue to be safe. EPA and HUD have developed lead-safe work practices training and HUD is subsidizing provision of that training. This approach of educating property owners and contractors on how to avoid creating lead hazards should be strongly supported to prevent the further increase in the number of housing units with lead hazards.

The greatest risk of lead poisoning occurs in older housing units that contain lead hazards and that either will be or are currently occupied by low-income families with children under 6. Almost 14 million housing units are occupied by low-income families. While only 1.6 million homes with lead-based paint hazards are presently occupied by low-income families with a child under 6, most low-income families move frequently, particularly those living in rental housing units, that are most likely to be in poor condition due to lack of maintenance. So it is fair to estimate that the number of hazardous housing units in which low-income families with young children now live or are likely to live in the near future could well exceed 3 million.

Controlling Lead Hazards

In Title X of the Housing and Community Development Act of 1992, the Congress established the framework for the Nation's effort to end childhood lead poisoning. Title X recognized that lead-based paint hazards could be safely controlled by treatment strategies short of full removal, thereby reducing costs. Subsequent research shows that this position was correct. The Center's evaluation of HUD's lead hazard control grant program shows that children's blood lead levels decline by 26 percent and dust lead levels decline by 66 percent in homes treated with modern methods.

Title X also shifted the emphasis from waiting until a child was found to have an elevated blood lead level before dealing with lead hazards to controlling lead hazards up front and preventing children from being lead poisoned in the first place. It directed HUD to require cost-effective lead hazard control treatments in Federally-owned and assisted housing. HUD's new lead regulation implements that statutory requirement. Cities, counties, and States should carry out those requirements without further delay; and HUD should enforce them scrupulously. Title X also established the lead hazard control grant program to fund lead work in privately-owned, low-income housing.

Since 1990, the number of housing units with lead-based paint hazards has been reduced and these reductions can be expected to continue. Some of this reduction results from market forces. Tens of thousands of the most contaminated housing are demolished every year. Some contaminated housing is remodeled in gentrifying neighborhoods. On the other hand, the percentage of housing units with deteriorated lead-based paint actually increased slightly, from 19 percent in 1990 to 22 percent in 1998, reflecting the continuing aging of housing and too commonly inadequate maintenance of housing occupied by low-income families.

As a direct result of Title X, as many as 1.4 million older, Federally-assisted housing units may be made lead safe through HUD funded rehabilitation over the next 10 years if contractors follow lead-safe work practices. City and State recipients of HUD's lead hazard control grants are controlling lead hazards in over 7,000 of the most at-risk housing units lead-safe every year. Many of those units were occupied by families with lead poisoned children. Many more units may be made lead-safe as a result of public education efforts as consumers come to demand lead-safety from painters and contractors.

Cost of Lead Hazard Control

The cost of lead hazard control treatments per housing unit treated under the HUD Lead Hazard Control Grant Program varies depending on the size and condition of the unit, the type of unit and the hazard control strategy selected, ranging from $2,000 for housing units in sound condition and with moderate lead hazards to $10,000 or more for deteriorated housing with substantial hazards. In many cases, HUD's grantees combine lead hazard control work with other rehabilitation activities. It is difficult to separate lead hazard control costs from rehabilitation costs, because the same activities, such as window replacement, serve both purposes. HUD estimates that the incremental costs for interim control lead hazard work average about $2,500 and $9,000 for abatement of hazards. From the property owner's point of view, however, the costs are frequently $5,000 to $10,000.

As a practical matter, neither market forces nor Federal programs are dealing with the most badly contaminated housing where children are most at risk of becoming poisoning. This housing is largely located in deteriorating inner-city neighborhoods where little or no private funds are being invested. Controlling the lead-based hazards in those units is so expensive that recipients of HUD grants avoid them so that they can treat more housing units with their limited grants. Housing in this condition is being abandoned every year; and some properties are being demolished with HUD block grant funds. But too many of these high-risk housing continue to be rented to low-income families who have little or no choice. These are the housing units in which two or three or more children become lead poisoned over the years as a succession of families with young children move in and out.

Thus, while progress is being made, at the present rate it will take at least several generations to make all housing safe for the Nation's children. The Nation will miss the goal of a lead-safe America in 2010 by a wide margin. There are a number of steps that can be taken to accelerate meeting that national goal, including:

- Full implementation of HUD's lead regulation.
- Establishing lead-safe renovation and maintenance as the national norm.
- Making rehabilitation of older, inner-city housing a national priority.
- Expanding environmental testing of older properties in at-risk neighborhoods.
- Demolition of obsolete and uneconomic properties and providing safe replacement housing.
- Making certain that no housing unit poisons children twice.

But as a practical matter, HUD's Lead Hazard Control Grant Program is the only realistic source of financing at this time for controlling lead hazards in the older, low-rent, poorly-maintained housing where children are most at risk. Private owners are unable or unwilling to make those housing units lead safe, because the costs of lead hazard control could never be recouped. In some cases it even exceeds the market value of the housing. Cities have other needs and priorities for HUD's Community Development Block Grant and HOME funds and may be reluctant to condemn units in the already dwindling stock of affordable housing for fear of increasing homelessness.

Conclusion

Childhood lead poisoning will end only when the Nation changes its priorities and recognizes childhood lead poisoning as an epidemic that must be broadly addressed. For starters, Congress should sharply increase appropriations for lead hazard control now. At present, the only effective program that can address the core of the problem is HUD's Lead Hazard Control Grant Program. The Center estimates that the annual appropriation for the program must be increased to $400 or $500 million if we are to prevent poisoning of generation after generation of young children who are likely to fail in school and lead unproductive lives.

PREPARED STATEMENT OF SHELDON WHITEHOUSE

ATTORNEY GENERAL FOR THE STATE OF RHODE ISLAND

NOVEMBER 13, 2001

Mr. Chairman and Members of the Subcommittee on Housing and Transportation.

Rhode Island has a serious lead paint problem. Lead poisoning is an insidious condition, because it ordinarily shows no immediate symptoms. The brain and nervous system damage lead causes is gradual, and has no physical telltales that might warn a parent. The widely spread legend that a child has to eat lead paint chips like potato chips to be lead poisoned is false, but has misled many families to underestimate the hazard for their children, particularly infants.

The Conservation Law Foundation of Massachusetts described us as "The Lead Poison Capitol of the United States."[1] Our Democratic General Assembly and our Republican Governor's Administration have both identified lead paint as the number one environmental health issue facing Rhode Island children.[2] The rate of lead poisoned children is two and a half times higher in Rhode Island than in the rest of the United States. In Providence, our capitol, the rate of lead poisoned children is four times higher than the rest of the United States.[3] We test the blood of every child entering kindergarten for lead poisoning. Every year, more than 2,000 kids reporting to kindergarten have elevated lead in their blood.[4]

Against this backdrop of a real public health calamity, Rhode Island has been active at the municipal, State, and Federal levels.

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[1] *Providence Journal-Bulletin,* May 18, 1998, at B.4.

[2] R.I. Gen. Laws § 23–24.6–3; Governor's Advisory Council on Health, First Annual Report 1999 at 18.

[3] *Providence Journal-Bulletin,* May 13, 2001, at A.1.

[4] 1998 through 2001 Rhode Island's KIDS COUNT Factbooks. In 1998, 3,010 kindergartners had elevated blood lead levels. In 1999, 2,327 kindergartners had elevated blood lead levels. In 2000, 1,873 kindergartners had elevated blood lead levels and in 2001, 1,713 kindergartners had elevated blood lead levels. These figures are based on the Center for Disease Control's finding that any blood lead level exceeding 10 mg/dL is elevated.

Municipal Response

The bulk of our lead poisoning occurs in older urban areas, and most of our older houses are located in our capitol city, Providence. Providence has been active in attacking lead paint.

The city's primary focus is on providing lead safe, healthy housing, and public education to its residents. Through an experienced lead abatement team, $5 million in HUD and National Safe Houses Corporation grants, close enforcement coordination with my office and the Department of Health, and aggressive public outreach to children, parents, schools, and even realtors, elevated blood lead levels in Providence's children have dropped from 38 percent of those entering Providence's kindergartens in 1998 to 25 percent of kindergartners today.[5] The city has further allocated $800,000 to help eligible owners make their properties safe.[6] Only a few weeks ago, Providence announced that another $4 million from the Neighborhood Improvement Bond will be used to shore up city housing stock and that the city has applied for another $3 million HUD grant.[7]

The Federal Effort

We have pursued Federal grants through HUD and other agencies and worked with Federal officials, primarily at HUD, EPA, and the U.S. Attorney's Office. Federal political leaders such as Senator Reed have shown considerable interest and vision.

The State of Rhode Island

The State of Rhode Island is addressing its lead paint public health hazard through a variety of agencies and means. Our Department of Health conducts the blood testing program I have described. In the year 2000, 32,313 children under the age of 6 were tested in Rhode Island; 2,804 (8.7 percent) of those children had elevated lead levels in their blood.[8] The Health Department follows up on each case where the child's blood lead level is 20 mg/dL or higher, with home inspections and case management.

Our Department of Human Services provides funding and care for low-income residents who experience lead poisoning and require medical treatment. Through referral to community-based service providers, Human Services, with Medicaid funds, pays for the screening of low-income children. In 1998, Rhode Island became the first and only State to receive permission from the Healthcare Financing Administration to use Medicaid funds for replacing or repairing windows in homes of lead-poisoned children if landlords or tenants satisfy eligibility requirements.[9] Since window repair and replacement is not normally a reimbursable item by Medicaid, this confirms the Federal Government's view that the lead paint health problem in Rhode Island is particularly acute.

The Department of Attorney General is involved primarily on the enforcement side. When we become aware that a residence contains dangerous levels of lead, usually by referral from the Department of Health, we take action to require owners and landlords to abate the lead. Landlords are not always willing, so we have repeatedly taken them to court and obtained orders, contempt judgments, and civil penalties to enforce their obligation to abate.[10] We have successfully completed 20 lawsuits. We have approximately 200 cases in the office in process right now, and roughly 100 homes and apartments (including the exterior and the soil that surrounds them) have successfully been abated or are in the process of abatement. We have referred cases for prosecution to DOJ, HUD, and EPA to enforce the Federal requirements[11] that landlords and sellers disclose lead hazards to buyers and tenants. We hope that the Federal Government will take a more active role in prosecuting these cases in the future.

In addition to recognizing the efforts of municipal, Federal and State government, I should take a moment to commend the community organizations that are so active in Rhode Island in this area: Health & Education Leadership for Providence, the

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[5] *Id.*

[6] *Providence Journal-Bulletin,* October 24, 2001, at C.1.

[7] *Id.*

[8] Department of Health, Office of Occupational and Radiological Health & Division of Family Health statistics.

[9] *Providence Journal-Bulletin,* December 11, 1998 at B.1.

[10] For example, in *Whitehouse* v. *Piscopio,* (KC 00–96), a Superior Court judge found a landlord in contempt after judgment had been entered against him and he was ordered to abate the lead hazards immediately. The judge's contempt order required the landlord to pay civil penalties, find and fund alternate housing for the tenants, and to immediately abate the lead hazards or face stiffer fines.

[11] 42 U.S.C. § 4851 *et seq.*; 15 U.S.C. § 2615 (a).

Help Lead Safe Center, the Childhood Lead Action Project, Greater Elmwood Neighborhood Services, various neighborhood and church organizations, Head Start, the VNA, and many nonprofit housing groups.

Blood, toil, tears, and sweat were Winston Churchill's exemplars of effort. In Rhode Island, the blood is given by infants and small children who must be regularly tested, and in some cases have their blood chelated. The tears are shed by family members who discover, often too late, and often despite very reasonable levels of maintenance of their homes, that their child has become lead poisoned. The toil and sweat come from the men and women of these community organizations who every day administer to the many needs of families facing these uncertainties.

Everyone in Rhode Island is working to clean up the lead paint mess. Municipal government, and thus municipal taxpayers, are pitching in. State government through many agencies, and thus State taxpayers, are pitching in. Federal efforts have been made through HUD, the EPA, and the Department of Justice. Volunteers and staff of community organizations are pitching in. Families, of course, bear a terrible share of the burden: the lead poisoning of their children, the worry and woe of mothers and fathers, the displacement of families from their homes, even the minor trauma of holding your child as painful and frightening procedures are performed to test for lead poisoning or to chelate lead out of the child's blood. Landlords and homeowners are pitching in, cleaning up lead paint that may have been put on years before they bought the home. There is only one group not pitching in: the lead pigment companies who sold this toxic material for decades, profited from it, lied about it, and are now trying to evade even the most microscopic share of responsibility for cleaning up the mess they created.

After determining that the pigment companies were prepared to do essentially nothing about this problem,[12] I filed a lawsuit, to determine what the fair share of responsibility of these companies is—I know it is more than zero—and to get the companies to contribute that fair share to the remedy of this problem.

The lawsuit was filed on October 12, 1999. The defendants are The Lead Industries Association, Inc., American Cyanamid Company, Atlantic Richfield Company, E. I. DuPont de Nemours & Company, The O'Brien Corporation, Conagra Grocery Products Company, The Glidden Company, NL Industries, Inc., SCM Chemicals and The Sherwin-Williams Company. The State of Rhode Island is represented by myself and my office, by a highly regarded Rhode Island law firm which represented the State with great success in litigation arising out of Rhode Island's 1991 bank failures, and by a national firm which has the depth to withstand the inevitable blizzard of paper. As Attorney General, I am directly involved in this case, guide its strategy, and successfully argued the case for the State against the motions to dismiss.

Our allegations fall into three groups. There are equitable counts; there is a statutory count under a Rhode Island State consumer protection statute; and there are a number of traditional tort counts which bear on the properties owned or maintained by the State of Rhode Island in its proprietary capacity.[13] For example, the public nuisance count would enable the Rhode Island Superior Court within its equitable jurisdiction to impose a reasonable order allowing more rapid and complete abatement of lead paint than the State presently has resources to accomplish. As the Rhode Island General Assembly has noted: "Rhode Island presently does not have the public nor the private resources to handle the total problem."[14]

I should point out that a public nuisance lawsuit, when brought by a responsible public official to vindicate a public harm, is not an ordinary piece of litigation. Its primary purpose is not to resolve a dispute between contending private parties, but

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[12] The effort most touted by the pigment companies is ClearCorps—a program of "lead abatement," which consists of deep cleaning. Although the effort of deep cleaning by ClearCorps is a positive development, the pigment manufacturers really only have minimal involvement and investment in the project, as it is primarily staffed by Americorps volunteers paid for by U.S. taxpayers. ClearCorps has performed deep cleaning in 122 units in Rhode Island.

[13] The equitable counts I am prosecuting in the State's sovereign capacity to obtain injunctive, equitable and other relief necessary to abate present harms and to protect the future health and well-being of Rhode Island's children. Public nuisance is in this category of claims.

The statutory count alleges violation of the R.I. Deceptive Trade Practices Act, R.I. Gen. Laws § 6–13.1, and is brought pursuant to the authority vested in my office by the General Assembly by that statute and pursuant to my authority to prosecute offenses and other legal or equitable processes. R.I. Gen. Laws §§ 42–9–4–42–9–5.

The tort counts I am pursuing for the State in a proprietary capacity include strict liability, negligence, negligent misrepresentations and omissions, and fraudulent misrepresentations and omissions.

I also seek damages from the defendants with counts of civil conspiracy, unjust enrichment, and indemnity.

[14] R.I. Gen. Laws § 23–24–6–2.

rather to protect the public health, safety and welfare. A public nuisance lawsuit is, in some measure, an exercise of the police power of the State.

Public nuisance law in Rhode Island and in most jurisdictions in this country requires first, that there must be a public nuisance. That means there must be a harm either to a public right or to a sufficient number of members of the public as to implicate a public interest,[15] and the harm must be serious and not merely trivial or annoying. This has been defined as an unreasonable interference that arises when "persons have suffered harm or are threatened with harm that they ought not have to bear."[16] Second, it must be determined who is responsible for the public nuisance. The standard of responsibility is whether the defendant has created or maintained the public nuisance or contributed to or participated in the creation or maintenance of the public nuisance.[17] Finally, if a public nuisance is proven to be a defendant's responsibility, the judge then has the authority to enter a reasonable order, consistent with the nature of the nuisance and with considerations of due process, as well as common sense and efficiency, for the protection of the public health.

What remedy do we seek that will relieve Rhode Island children of the hazard of lead paint poisoning? Ideally, all lead paint needs to be removed from residences where children may be exposed. With limited resources, the first priorities are (1) to remove lead from friction surfaces such as doors and windows, (2) to assure that repairs and maintenance are done in a way that does not expose residents to lead dust, and (3) to encapsulate lead surfaces, since it is lead's nature to chalk and form poisonous dust.

I will conclude my remarks by observing that I am just a small State Attorney General, and this lawsuit has provided me my first experience of national level spin. I will not bore you here with a description of the various characterizations of this lawsuit, characterizations of my motivations or characterizations of the facts of lead paint poisoning. It will suffice to say that we wish as quickly as possible to bring this case forward, so that we can present the State's case and the defendants can present theirs, and a decision can be made not on rhetoric or spin but on evidence and facts. One way or the other, our case will stand or fall on its factual and legal merit. We look for the outcome of that process to be a fair and sensible order requiring the defendants to contribute in a fair and sensible way to the clean up of the mess they made.

If Rhode Island is to be considered the lead paint capitol of the United States, then let it as well be considered the capitol of lead paint solutions—solutions to a silent public health menace to our children and to children throughout the United States.

PREPARED STATEMENT OF RICHARD A. FATUR

ENVIRONMENTAL PROTECTION SPECIALIST
COLORADO DEPARTMENT OF PUBLIC HEALTH
AND THE ENVIRONMENT

NOVEMBER 13, 2001

Good morning, Chairman Reed, Senator Allard, and Members of the Subcommittee. My name is Rick Fatur, and I am an Environmental Protection Specialist with the Colorado Department of Public Health and the Environment's Lead-Based Paint Program. This morning, I have been asked to testify before your Subcommittee on Colorado's Lead-Based Paint Program.

First, I want to thank you for inviting me to this discussion on State and local lead-based paint programs.

I would like to start by giving you a summary and overview of our State program.

- I would say that Colorado is an example of a State with an average childhood lead poisoning problem. We have found that 3–4 percent of the children tested have elevated blood lead levels, which is close to the national average. We have identified pockets or areas where 15–20 percent of the children have elevated blood lead levels. But we do not seem to have the problem some States have where certain cities or areas may have up 50 percent of the children with elevated blood lead levels.

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[15] *Hydro-Manufacturing, Inc.* v. *Kayser-Roth Corp.,* 640 A.2d 950, 959 (R.I. 1994).
[16] *Wood* v. *Picillo,* 443 A.2d 1244, 1247 (R.I. 1982).
[17] *U.S.* v. *Hooker Chemical and Plastics,* 748 F.Supp 67 (W.D. N.Y. 1990).

- The only current Colorado State lead-based paint (LBP) regulation covers the abatement of lead-based paint.
- Colorado's LBP regulation for abatement is nearly identical in content to the Federal EPA LBP regulation for abatement, with just a few minor differences.
- The current regulation covers the following items.

1. There are requirements for conducting:

- LBP Inspections
- LBP Risk Assessments
- Abatement Projects

2. In addition, Abatement Projects:

- Have requirements for Notification
- Need to be conducted by certified abatement firms using certified workers and supervisors
- Are inspected by the State to ensure that proper work methods are being used

3. Compliance:

- Enforcement actions may be taken for noted violations

4. We require certification of:

- Abatement Firms
- Workers, Supervisors, Designers, Inspectors and Risk Assessors

5. We approve Training Providers:

- Classes are audited to ensure proper course content
- Overall the State regulation is working well. Inspections, risk assessments, and abatements are presently all voluntary activities. I believe lead poisoning could be further reduced if triggers could be introduced requiring these activities be conducted under certain circumstances.

I would now like to address some of the positive aspects of our program.

- We are showing an increase in abatement activities/projects, which shows that people are becoming more aware of the problem.
- We are also showing an increase in the number of abatement firms, and all personal certifications.
- Working "lead-safe," by containing and controlling lead hazards, is becoming more a common practice.
- Since inspections, risk assessments, and abatements are voluntary actions, a major part of the program is outreach and education. We developed a Colorado Lead Coalition to help us with these activities and are seeing very good results from its work. Incidentally, the EPA honored our Colorado Lead Coalition with an Environmental Achievement Award on October 30. Members of the Coalition include:

  Colorado Department of Public Health and Environment
  Environmental Protection Agency
  Colorado Department of Housing
  Denver Environmental Health
  Denver Housing and Neighborhood Development
  Northeast Denver Housing Center
  Denver Water Board
  Agency for Toxic Substances and Disease Registry

  New Coalition members for this next year will include:

  OSHA
  HUD
  El Paso County Health Department

- The Colorado program for testing children is working well and we continue to see an increase in the number of children being tested.
- We have begun the process of revising our State regulation to mirror the new EPA regulatory requirements issued in January 2001.

Finally, I would also like to discuss some of the problems we have seen, not only within our State, but also nationally.

- By far the majority of projects are being done for the purpose of renovation and remodeling, *not* abatement. Abatement is the elimination of lead-based paint hazards and must be conducted in accordance with existing regulations. HUD requires some training to control lead-based paint hazards during HUD renova-

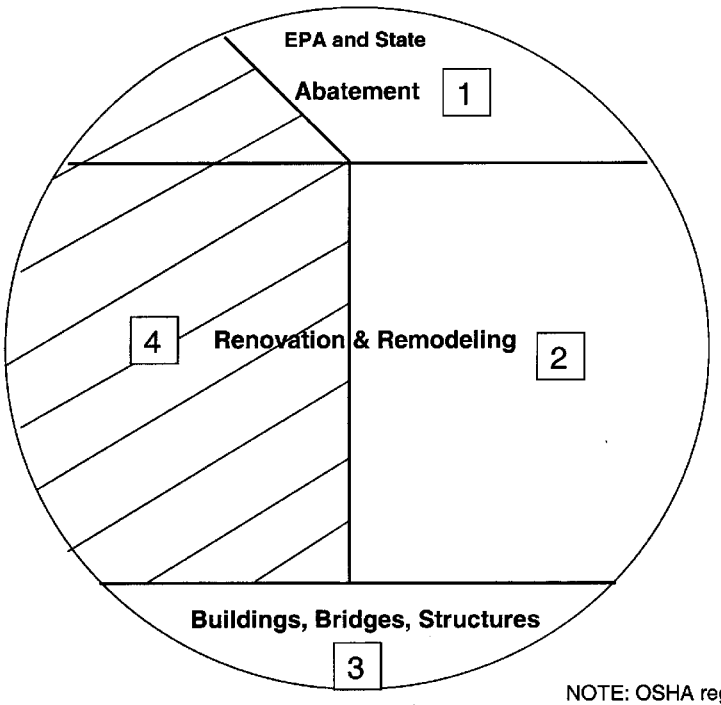
tion and remodeling projects, but the vast majority of renovation and remodeling projects are still being done by untrained persons without any control measures.

- Again, I believe that lead poisoning could be further reduced if triggers could be in-troduced requiring inspections before renovation and remodeling is permitted, and requiring that risk assessments and abatement be conducted under certain circumstances.
- The EPA needs to promulgate their other regulations as quickly as possible to close the present loopholes. These include the regulations covering:
  1. Renovation and Remodeling
  2. Buildings, Bridges, and Structures
- One of the most significant problems involving lead-based paint is the lack of funding or financial assistance available for abatement or lead-safe renovation and remodeling. Although there seems to be enough funding for training, outreach, education, and even free training classes, almost no money exists to help the underprivileged families who have lead poisoned children and have an urgent need for interim controls or abatement to correct lead-based paint hazards in their homes. We should think of ways to focus more immediate attention on this issue.

We will all need to work together to resolve some of these problems in order to reach our Nation's goal of eliminating childhood lead poisoning by the year 2010.

Thank you very much and I would be glad to respond to any questions you may have. I have also included a rough diagram of LBP regulations and how they affect each other. I would be glad to discuss the diagram if anyone has any questions.

1. EPA and State regulations are currently in place.
2. EPA Renovation and Remodeling regulation is due out in 1-2 years.
3. EPA Building, Bridges and Structures regulation may be out in 3-4 years.
4. HUD regulations are currently out:
   - Currently overlaps EPA and State regulations for abatement
   - Will overlap EPA Renovation and Remodeling regulations



NOTE: OSHA regulation applies to all areas

HUD regulation

Figure 1. This diagram shows the different lead-based paint regulations in relation to the nation's overall program.

PREPARED STATEMENT OF SUE HELLER

PROJECT ADMINISTRATOR OF THE
MANCHESTER LEAD ABATEMENT PROJECT
MANCHESTER, CONNECTICUT

NOVEMBER 13, 2001

I am Sue Heller and I run the Manchester, Connecticut Lead Abatement Project (LAP). Thank you for inviting me to talk about lead. I am proud to be here in the presence of so many lead gurus who have directed their own energies and staff work toward lead solutions.

Senator Reed has scheduled the first lead hearing in 10 years, another milestone in his quest to end childhood lead poisoning in real time. Senator Reed has a proud lead legacy in bills, allocations, the Medicaid mandate and the national designation of Lead Week. What better place to be, in a hearing where rank is accorded to Senator Wayne Allard, who represents Leadville. Today, we are all from Leadville.

Connecticut's lead muse is Senator Christopher Dodd, a long-time champion of children, housing and Medicaid. Senator Joseph Lieberman provides Connecticut with ongoing knowledgeable, substantive support to the lead issue and to projects. Our Representative John Larson actively seeks out and disseminates successful lead measures through his district.

Manchester, as a HUD grantee is lucky to have the insightful effective leadership of David Jacobs the Director of HUD's Office of Healthy Homes and Lead Hazard complemented by valuable counsel from Ellis Goldman and Stan Galik.

Special thanks to Nick Faar, at the National Center for Healthy Housing and Don Ryan of the Alliance to End Childhood Lead Poisoning who are constant mentors.

The town of Manchester's sound administrative infrastructure has benefited LAP through leadership from Mayor Stephen Cassano, longtime Health Director Ronald Kraatz, and Town Managers Richard Sartor and Steven Werbner among others. There has been nonpartisan support from the legislature (kudos to Representatives David Blackwell and Jack Thompson), with help from the Governor's office, and officials from the State Departments of Public Health and Economic and Community Development. On a day when thoughtful people around the world are preoccupied with national values, security and other imponderables, it is a comfort to be able to talk about a preventable soluble problem—childhood lead poisoning.

Connecticut Issues

Visitors come to Connecticut to tour historic old homes. The strength of Connecticut's housing market is dependent on old and attractive housing, 1,113,000 housing units were built before 1980 and 462,000 built before 1950. It is estimated that nearly 500,000 carry some lead risk, 65,000 have real hazards.

Lead safe work practices are not universally used by Connecticut construction workers or remodelers who work on older housing, which have more weather beaten wooden construction and wrap-around porches, than in other sections of the country. Whether remodelers call what they do lead work or not, lead is involved in construction or repair of old houses; the danger is that construction can create dust and risk, in the absence of lead-safe practices. And workers in some industries bring lead dust home from work on clothes or shoes particularly hazardous if they hug their children when they come home from work before they shower and change clothes.

While blood lead screening is increasing in the large cities, not enough testing is done and too few children are screened or tested at appropriate intervals. Smaller jurisdictions do less testing so children who have low lead levels without obvious symptoms are often not identified. Medicaid children are frequently not tested despite a Federal Medicaid mandate.

In 1999 alone, 2,017 Connecticut children (under 6 years of age) were found to have blood lead levels over 10 μg/dL, a recognized level of concern and 460 over 20 μg/dL, the level that usually defines poisoning. There are many additional children with elevations who were tested in other years or have never been tested at all.

Many of the State's 228,000 children under 6 years old and particularly the 31,399 in poverty or those Medicaid-eligible are vulnerable to lead poisoning, because they move frequently from one substandard house to another.

While State regulation obligates landlords to correct home environmental conditions when a child is poisoned at a blood lead level over 20 mg/dL, insufficient cash flow in low-income housing deters compliance. There are few if any financial resources to remediate housing conditions for mildly poisoned youngsters, who are not covered by regulation. Recent studies indicate that children are more vulnerable to lower and lower levels of lead even under 10 mg/dL, once thought to be the upper limit of safe exposure and that poisoning is likely to be irreversible (fortunately

treatable). Therefore, prevention—primary and secondary—offers the only real solution to childhood lead poisoning.

Certainly it is cheaper for both the private and public sectors to maintain existing housing stock by treating a unit preventively for lead at $2,500 to $5,000 a unit, than to abate at $10,000 or to replace at over $100,000, a unit.

State Approaches

Connecticut responds to the prevailing lead problems of old housing, ignorance of lead safety, insufficient screening and a shortage of resources.

The Health Department delivers lead information to the public through training, and widely disseminated literature and videos. Manchester has piloted many training measures for the State: lead-safe practices needed to meet 1012–13 regulation, CEU licensure in day care real estate brokerage and construction contracting. The New England Lead Coordinating Committee's Keep It Clean Campaign, which promotes lead safe work practices, was born in Manchester, Connecticut, and spread quickly through the State, and region, training personnel in paint and hardware stores to help customers to address lead hazards effectively.

Some jurisdictions have succeeded in winning lead grants but some of the most leaded areas have been unsuccessful at competing for scarce Federal lead funding. (Bridgeport has the highest number of lead cases in the State.)

Connecticut has built a local network to deal with lead using municipal health departments and doing quarterly in-service education. The court system has been proactive in enforcing laws. Hartford, has begun to use post office resources to generate attention and resources from stamps and cancellation messages. Hartford has also an interactive reading program for beginning readers based on lead. Connecticut has studied blood lead screening data comparing State-wide data with Medicaid data, which points to the need for remediation in Medicaid households. There are two successful lead-safe houses to serve the State for relocation. They are frequently full; the lead-safe houses themselves require added resources to maintain their own code-compliant lead safe conditions.

Manchester Approaches

Manchester has used the 325 dwellings abated with HUD's lead money as laboratory cases to pilot innovations. We have moved closer to prevention by invoking four different levels of lead intervention, reducing average unit costs for abatement to less than $8,000 from the $11,500 it cost us in 1997 (in a range of $1,000 to $12,000 now). (Around the State costs are generally much higher, but will probably drop with experience). LAP generates local economic development by identifying and launching business opportunities presented by lead to local construction contractors, workers and suppliers. We have developed a local economic sector of the construction industry devoted to lead along with customized training for thousands of participants from various population groups, thereby building local capacity to deal with lead in many quarters.

Certified job training and placement has aided hundreds of construction workers, many underemployed or unemployed. We have used lead funds to trigger home ownership for 14 low-income, first-time homebuyers affecting about 30 households. Manchester has been able to meet town community development and housing affordability objectives as we spend HUD's abatement money. We combine community development block grant funds (CDBG) and other dollars and policies to effect comprehensive, integrated rehabilitation in a single scope of work to carry out town community investment objectives.

LAP developed a lead insurance pool, which induced construction contractors to engage in abatement. Because of our excellent experience rating, the insurance industry extended coverage to more contractors and lowered annual premiums to an affordable $6,000–$8,000 from $18,000 to $24,000 it charged earlier.

We continually export our local experience to other communities, the region and the State. LAP won a National Best Practices Award and a local Customer Service Award, LAP was cited for cost-effectiveness, education, prevention capacity building and creativity. But this is not sufficient to fulfill our mission to make Manchester a lead-safe community. Dollars are needed to complete our work and institute more preventive measures earlier to target needy households, before a child is poisoned.

LAMPP

Manchester recently spearheaded LAMPP, *Lead Action for Medicaid Primary Prevention,* which was jump-started by Senator Dodd early in its development less than 2 years ago. The Senator responded to the opportunity to ensure the maximum potential for Medicaid children who are more vulnerable to lead risks and other compromising conditions. The exposure given through Senator Dodd's interest expedited LAMPP's development and encouraged participation.

LAMPP will rehabilitate lead hazards in residential units that house Medicaid youngsters around the State. Children under 6 years of age with mild elevations of blood lead will be referred by Medicaid's Managed Care health providers so that their homes can be treated with preventive, low-cost, cost-effective lead treatment measures. Window repair or replacement, paint stabilization and grass seeding will be complemented by home environmental assessments and education for parents and landlords. The State just allocated $200,000 a year for a 2 year pilot. Local contributions will come from existing lead and housing programs, private participation, State bonding, Medicaid, Medicaid providers, hospitals, etc. and, if we are properly persuasive, from the Federal Government. LAMPP is operated by the Connecticut Children's Medical Center.

LAMPP was spawned by State lead entities under auspices of the Get the Lead Out Coalition, public and private sector health and housing entities collaborating with property owners, hospitals, nonprofits, public agencies and legislators from both sides of the aisle. LAMPP is modeled after Manchester's LAP, itself a collaborative effort. LAMPP will address lead poisoning which disproportionately affects Medicaid recipients—poor youngsters who live in older housing.

LAMPP Benefits

- Improve health of Medicaid children—who are most at risk.
- Invest in affordable housing and home environmental conditions thereby aiding occupants, owners and neighborhood residents.
- Pilot for Medicaid as an approach to meet the letter and spirit of its Federal Medicaid mandate.

Based on what we have learned, what must be done to solve lead poisoning?

- Devote more funds to deal with children at risk who are not poisoned, continuing to react to those already poisoned. Prevention measures in needy households cost less.

Judicious management can shorten the solution period and broaden the impact of expenditures permitting economy and cost-effectiveness, simultaneously promoting economic development and housing improvement.

- Increase blood lead screening and use the data dynamically to guide remediation. Pinpoint Medicaid youngsters who are disproportionately at risk and for whom the Federal Medicaid mandate can provide a functional and financial lever.
- Target money to vulnerable but not yet poisoned youngsters at an early age. LAP's early action alternatives are directed at lead-safety for newborns encouraging nursery preparation and prenatal education for parents. LAP is partnering with a target neighborhood elementary school to formulate a curriculum to educate children, their parents, and teachers .
- Lower costs as we gain more knowledge from best practices, research, and equipment.
- Economic incentives must be identified to encourage repair as opposed to replacement, because routine repair can be cheaper.
- Demonstrate to owners how a turnover strategy, to treat units, between tenants, preemptively quickly and cost-effectively, can pay off.
- Demythologize lead treatment: its costs and its liabilities, by demonstrating cost-effective remediation.
- Listen to affected constituencies to respond to concerns by parents, landlords, construction contractors, real estate market participants, and health providers.
- Convey information customized on a need to know basis to attract audiences.
- Increase outreach and marketing to broaden the constituency for lead.
- Find private sector partners so lead safety can evolve from an iffy supposition for them into an ongoing sound investment maintenance strategy recognized by the real estate market.
- Upgrade rehabilitation skills—teaching remodelers about lead safe practices and expedite remediation with help in relocation, etc. Offer technical aid widely, encouraging those who can afford to remediate themselves.

Programs like ours can only remediate an infinitesimal (3 percent) of the real needs. With additional dollars wisely used and carefully targeted we can satisfy the necessary demand for assisted remediation. (LAP has only been able to abate 368 units out of 680 applicant units of the estimated 13,250 dwelling units in need in the target area.) Early prevention can deter the lifelong neurologic impairment of kids, preclude even more costly treatment of poisoned children and their households and stem the need for expensive special education and behavioral intervention necessary once a child is poisoned. Well managed, the strategy can be implemented in a few years with compound benefits: healthier children, sounder housing, and improved neighborhoods.