Childhood Lead Poisoning: Solving a Health and Housing Problem

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Abstract

Lead poisoning is the Nation's number one children's environmental health problem. Children are poisoned primarily by ingesting lead from household dust in older, low-rent housing. The best way to prevent this situation is to make housing in which young children live or are likely to live lead safe. The Lead-Based Paint Hazard Reduction and Financing Task Force recommended a set of lead-safe standards that would protect children and would be feasible for property owners. It also proposed that, if a resident child were found to have an elevated blood lead level, owners who could document compliance with the standards be afforded some liability relief. Complying owners would then become eligible for liability insurance and financing. HUD is working with State and local governments and the real estate, lending, and insurance industries to develop programs to implement the Task Force's recommendations.

This article was prepared as background information for the Symposium on State and Local Roles in Implementing Lead-Based Paint Hazard Control in Privately Owned Housing, convened by the U.S. Department of Housing and Urban Development's (HUD's) Office of Policy Development and Research and Office of Lead Hazard Control (formerly the Office of Lead-Based Paint Abatement and Poisoning Prevention). It was suggested that the article be read in conjunction with the report of the Task Force on Lead-Based Paint Hazard Reduction and Financing. The article concludes with issues for consideration at the symposium.

The Health Problem

Childhood lead poisoning is "the number one environmental health hazard facing American children." (Sullivan, 1991.) According to the Centers for Disease Control and Prevention, 8.9 percent of preschoolers are affected, making lead poisoning the foremost preventable childhood disease. Even at low levels, lead poisoning in children causes reductions in the intelligence quotient (IQ) and attention span, reading and learning disabilities, hyperactivity, and behavior problems. These effects can be irreversible,

reducing the potential for success in school and affecting performance later in life. Although lead is ubiquitous in industrial society, the foremost causes of childhood lead poisoning in the United States are (1) deteriorated lead-based paint and (2) lead-contaminated dust and soil in and around older housing. Lead poisoning afflicts children across all socioeconomic strata and in all regions of the country. However, because lead hazards are most severe in older, deteriorating housing, people of color and the inner-city poor are disproportionately affected. In many inner-city neighborhoods, more than one-half of the young children suffer from lead poisoning.

Prior to 1995, there were no generally accepted standards for lead hazard control—short of full abatement—that would enable property owners to exercise reasonable care. Lead was banned from residential paint in 1978, but three-fourths of pre-1978 housing units contain some lead-based paint—an estimated 64 million privately owned units. The mere presence of lead-based paint does not necessarily require immediate action. Children are poisoned by being exposed to lead, most commonly by ingesting lead found in interior surface dust. Children can also be poisoned by eating lead paint chips or lead-contaminated dirt or from exposure to other sources through other pathways. Renovation and remodeling projects that disturb lead-based paint may generate significant lead dust hazards and frequently cause poisoning.

The third National Health and Nutrition Examination Survey (NHANES III)[1] documents a sharp reduction in the incidence and severity of childhood lead poisoning during the past 15 years, primarily as a result of the elimination of lead from gasoline and lead solder from food cans. Nevertheless, the survey also shows that more than 16 percent of all low-income children and almost 37 percent of African-American children residing in cities with populations greater than 1 million have elevated blood lead levels. The vast majority of those children live in low-value, low-rent, privately owned housing. According to NHANES III: "To achieve additional reductions in blood lead levels in the U.S. population, sources other than lead in gasoline and lead in solder need to be addressed further. The major remaining sources are lead in paint and lead that has accumulated in dust and soil. Without efforts to reduce these exposures, population blood levels are unlikely to decline." (Pirkle et al., 1994.)

Shift to Primary Prevention

Historically, the country's approach to childhood lead poisoning has been reactive. After a child has been identified through a blood test as poisoned, action may be taken to investigate the home environment in order to identify and address lead hazards. In public health terminology, this after-the-fact intervention is known as "secondary prevention." A "primary prevention" approach emphasizes identifying and correcting lead hazards in housing before a child is poisoned, thus shifting the focus from the child to the environmental exposure source. A consensus has evolved among health, housing, and environmental leaders that, in addition to universal blood lead screening, public policy must be redirected to primary prevention; that is, controlling lead hazards in all older housing in which young children reside or are likely to reside.

Federal studies clearly show that the benefits of preventing childhood lead poisoning outweigh the costs of controlling lead hazards. Preventing the disease avoids painful and expensive chelation therapy, reduces health-care costs, and advances our national education goal of sending children to school "ready to learn." Children with elevated blood lead levels frequently require special education. A year of special education typically costs as

much as the one-time expense of making a dwelling lead safe for all current and future occupants. Broader societal benefits include increased earnings, a more competitive work force, and possibly a reduction in criminal behavior.

In addition, many abatement strategies (window replacement, for example) help to extend a housing unit's useful life, add to its value, and provide such collateral benefits as greater energy efficiency and long-term cost reductions. Finally, expanding lead hazard control activities may provide meaningful job training and employment opportunities in communities with the greatest needs. Making U.S. housing lead safe is a sound investment that deserves a high priority in both the public and private sectors.

Crisis in Affordable Housing

Lead poisoning adds another dimension to the Nation's affordable housing crisis. The 1993 American Housing Survey (AHS), conducted for HUD by the U.S. Census Bureau, found that 6.6 million renter households and 4.6 million owner households either paid more than one-half their income for housing or lived in seriously substandard housing. The majority of these households were poor and lived in older housing units. Eighty-two percent lived in units built before 1979, 58 percent had incomes below the poverty level, and only 14 percent had incomes above 200 percent of the poverty level. Eighty- five percent of the renters lived in privately owned units with no form of housing subsidy.

Because units occupied by low-income renter households tend to be older and in poor condition, the units are more likely to contain lead hazards. Thus lead hazards constitute one of the Nation's foremost affordable housing problems as well as a major challenge to our commitment to provide decent, safe, and sanitary housing for all Americans. Capital is scarce, and options for cleaning up the millions of units housing low-income families are limited. In many cases, property owners do not have access to funds to correct lead hazards, or such investments do not make economic sense in the marketplace, although they clearly do so from a societal standpoint. In other cases, the cost of lead hazard abatement may raise rents beyond the reach of low-income families.

Parallel to the issue of housing affordability is the concept of economically distressed housing. The National Center for Lead-Safe Housing has analyzed data from the 1993 AHS to determine the extent of economic distress in the rental housing stock, using the definition of distress developed for HUD's Title X Task Force (see below). *Economically distressed* rental housing: (1) costs less than $500 a month for rent and utilities; and (2) is occupied by households with incomes below $20,000 that pay more than 30 percent of their income for housing costs. Economically distressed housing has two subsets. *Moderately distressed* units are those whose occupants pay 30 to 50 percent of their income for housing costs. *Severely distressed* units are those whose occupants pay more than half of their income for housing costs.

In 1993, using these criteria, 63 percent of the Nation's 33.5 million occupied rental housing units were economically viable, 28 percent (9.2 million) were moderately distressed, and 9 percent (3 million) were severely distressed. Children under age 6 lived in 7.2 million rental units, 29 percent (2.1 million) of which were moderately distressed and 10 percent (0.7 million) severely distressed. Nearly four-fifths of the occupied rental housing stock (26.3 million units) was built before 1978. Only 2 percent of all units and 3 percent of the distressed units consisted of a single room, which makes them unlikely to be occupied by young children.

Minority families with children under age 6 are more likely than other households to live in distressed units. Of those families residing in pre-1978 housing, 30 percent were in moderately distressed dwellings and 11 percent in severely distressed units. But more than half (55 percent) of African-American households with children under age 6 living in pre-1978 housing were in distressed units, as were 38 percent of Hispanic Americans and 38 percent of whites.

This analysis has three major implications. First, a majority of rental housing units currently or likely to be occupied by families with very young children are economically viable and can be made lead safe without public subsidies. Second, a substantial portion of the distressed housing stock—those units classified as moderately distressed—can be made lead safe if adequate financing, perhaps including grants or shallow subsidies, can be made available. Third, the severely distressed portion of the stock—87 percent of which is occupied by households with incomes below the poverty level—will require substantial public subsidies to be made lead safe.

Strategic Approach To Make Housing Lead Safe

Since the ultimate public health goal is to remove all sources of lead exposure that can pose a hazard to human health, the elimination or permanent containment of all lead-based paint is desirable, as all paint is likely to fail over time. However, the immense cost of this endeavor—about $500 billion—requires a strategic approach to the ultimate goal, and the interim objective is to make all U.S. housing lead safe as rapidly as possible. This goal requires that initial attention be focussed on identifying and controlling lead hazards—those specific conditions and surfaces that present or can present immediate lead exposures.

The Residential Lead-Based Paint Hazard Reduction Act of 1992 (P.L. 102–550), known as "Title X," adopts the concept of primary prevention and establishes a strategic approach for allocating initial resources to the worst lead hazards. To achieve these goals, Title X focusses attention on evaluation and control of lead-based paint hazards through a phased approach that includes both interim control measures to manage lead hazards over the short term and abatement projects to eliminate all lead hazards permanently. (*Permanently* refers to a treatment that is effective over the long term.) This new concept represents significant progress in making prevention a reality, breaking with the traditional "all-or-nothing" approach that typically has resulted in no action at all.

Title X Requirements

Under Title X, both HUD and the U.S. Environmental Protection Agency (EPA) set standards, nurture a private-sector infrastructure for the evaluation and control of lead hazards, and manage programs to control hazards in housing occupied by low-income families.

HUD and other Government agencies are required to take specific steps to evaluate and/or control lead hazards in federally assisted housing. The extent of mandatory hazard evaluation and control will escalate as the Federal role increases. HUD will issue regulations for Title X late in 1996 and has already published comprehensive guidelines that describe state-of-the-art best practices for the evaluation and control of lead hazards. HUD has also made grants to 53 State and local governments to finance the identification and control of lead-based paint hazards in private housing occupied by low-income families. The programs of 13 of these grantees are being carefully evaluated so that all cities and States can learn the cost-effectiveness of a variety of lead hazard control strategies.

EPA is establishing minimum national standards for the training and licensing of lead paint inspectors, risk assessors, and abatement workers and supervisors, as well as for the performance of paint inspections, assessment of lead hazard risks, and abatement of lead hazards. EPA is also financing the development of courses to train lead hazard abatement contractors, supervisors, and workers; paint inspectors; risk assessors; and interim control and operations maintenance supervisors and workers. In addition, EPA is helping to establish a nationwide network of training centers.

Beginning in 1996 or early 1997, all sellers and lessors of housing built before 1978 must provide buyers and lessees with an educational pamphlet about lead hazards and must disclose any available information on existing hazards. Buyers will be given 10 days to obtain an inspection or risk assessment at their expense and negotiate the consequences of a finding of lead-based paint or a lead-based paint hazard.

The Occupational Safety and Health Administration has issued regulations to protect construction workers who might be exposed to lead. These regulations require such protective measures as respirators, special clothing, sanitary arrangements, and periodic medical examination when construction work is likely to result in elevated levels of lead in airborne dust.

Title X Task Force

While Title X made major strides in dealing with lead hazards in federally assisted housing, it left to a special task force the job of determining how to induce private owners of pre-1978 housing to control lead hazards. In 1993, Secretary of Housing and Urban Development Henry Cisneros appointed representatives of all of the major organizations affected by or interested in lead-based paint in private housing to the Task Force on Lead-Based Paint Hazard Reduction and Financing. These representatives included rental property owners; lenders; insurers; realtors; homebuilders; nonprofit housing providers; legal services attorneys; contractors; Federal, State, and local health and housing agencies; and advocates for environmental health and low-income housing.

The Task Force found that the existing system of State and local laws and tort litigation was not effective in preventing children from becoming poisoned, in stimulating control of lead hazards, or in compensating poisoned children. Of the relatively few States that addressed the problem at all, most responded to poisoned children and required housing to be made lead-free, but provided no funds to finance this expensive procedure. Many of the laws were based on outmoded perceptions of the sources of lead poisoning and ignored lead in household dust. Even those laws were rarely enforced.

The majority of children with elevated blood lead levels lived in privately owned, unsubsidized, low-rent housing. The owners of such housing faced an apparently unsolvable dilemma. The cost of fully abating the lead hazards often equalled the value of the house. Property owners could not afford to pay for full lead hazard abatement. However, if they failed to perform full abatement and a child residing in their housing was found to have an elevated blood lead level, the owners could be sued for failing to provide safe housing or for negligence in failing to abate lead hazards. As the number of such lawsuits escalated, insurance companies increasingly refused to provide liability coverage for lead poisoning claims, particularly in the case of inner-city properties where exposure was most likely.

Faced with this dilemma, property owners had little or no incentive to control lead hazards. Instead, many took steps to insulate themselves from liability by dividing their holdings into small corporations with little or no equity. Many owners would like to sell out, but there is virtually no market in neighborhoods where lead poisoning is prevalent.

As a result of these factors, neither the real estate market nor the tort system was effective in prompting property owners to control lead hazards or in compensating poisoned children. A handful of families received million-dollar awards, scaring owners and insurers, while 99 percent of poisoned children received little or no compensation, either because no claim was made or because the property owner escaped judgement. In any case, awards came too late to protect the poisoned child.

The Task Force agreed that the focus should be on primary prevention, such as making housing in which young children lived or were likely to live as lead safe as possible before the children could be exposed. Cost-effective lead hazard control standards were needed to provide protection for children, but the realities of housing affordability had to be recognized also. Governmental enforcement of lead hazard control standards would have to be complemented by a method of engaging market forces to induce property owners to meet those standards. Programs would have to be targeted to housing in which children were most likely to be exposed to lead hazards and in which market inducements would be effective. Because *severely distressed* rental housing that yields little or no cash flow would not respond to market forces, substantial public subsidies would be needed to make such housing lead safe.

Task Force Recommendations

To deal with this complex environmental health and affordable housing problem, the Task Force developed a comprehensive set of recommendations for action by all levels of government; the real estate, lending, and insurance industries; and advocates for health issues, the environment, and affordable housing. These recommendations are mutually interdependent and reinforce one another. When fully implemented, they should induce owners of most older properties to control lead hazards without disrupting the affordable housing market, sharply decrease lead poisoning, and increase the likelihood that children with elevated blood lead levels will receive timely compensation.

The recommendations can be grouped into four categories:

- A set of benchmark, cost-effective lead hazard control standards.
- Changes in the liability system that will provide relief to owners who can document compliance with those standards and will facilitate claims against owners who do not comply.
- Private-sector finance and insurance strategies to leverage action for millions of private housing units.
- Public-sector strategies, including subsidies, education, research, and procedures to provide lead-safe housing for families with young children.

Hazard Control Standards

The Task Force recognized that there is some risk of acquiring lead poisoning in all housing built before 1978, the year that lead-based paint was largely banned for residential use. However, the risks are much greater in older, poorly maintained rental housing occupied by low-income families. The Task Force wanted to ensure that such properties would be adequately treated to protect children at highest risk without imposing unnecessary expense on the owners of newer, well-maintained housing that posed less risk. Because housing conditions and sources of lead exposure vary substantially, it was difficult to identify a broadly applicable objective criterion that separates higher priority housing requiring a more demanding lead treatment standard from lower priority housing requiring less expensive measures.

In its 1990 survey of lead-based paint hazards in housing, HUD found that the age of housing was closely correlated with the presence of lead hazards. Paint manufacturers had begun to reduce the lead content of paint by 1950. Therefore, the Task Force adopted that year as the benchmark date for identifying housing with a higher priority for lead hazard evaluation and control, although it urged States and localities to set more precise priority standards if supporting data were available. The Task Force also recommended that lead hazards be addressed when housing became vacant during rental turnover. Hazards can be controlled more efficiently when no furniture or rugs are present and the danger of exposing occupants can be avoided. The alternative of requiring hazard control activities in housing that shelters young children has the additional drawback of encouraging landlords not to rent to such families.

The Task Force recommended that housing codes be amended to require that owners of all pre-1978 rental housing carry out Essential Maintenance Practices.[2] These practices, listed in exhibit 1, require visual inspections for peeling paint, use of safe work practices to repair deteriorated painted surfaces, and provision of lead hazard information to all tenants. If owners are notified that a resident child has an elevated blood lead level, they must arrange for a risk assessment, cooperate with the local health department, and promptly control any identified hazards. Owners who can document that their housing does not contain lead-based paint are exempt from all requirements.

The Task Force also proposed that owners of an estimated 12 million higher priority housing units (for example, pre-1950 housing) either arrange for a risk assessment at the time of turnover and correct identified hazards or carry out prescribed standard treatments designed to control the lead hazards to which children are most likely to be exposed. While each State or locality would establish its own standard treatments based on local conditions, the Task Force identified a set of treatments (described in exhibit 2) likely to be both effective and affordable for most property owners. These activities are performed most safely and efficiently at the time of rental turnover. However, if a housing unit is occupied continuously by a family with one or more young children for as long as 18 months, the Task Force recommends that the owner control any existing hazards without waiting for turnover.

Exhibit 1

Essential Maintenance Practices for Property Owners

1. **Use safe work practices** during work that disturbs paint that may contain lead, to avoid creating lead-based paint hazards. Do not use unsafe paint removal practices, including:

- Open flame burning.
- Power sanding or sandblasting (unless a special vacuum attachment is used to contain dust).
- Water blasting.
- Dry scraping more than a *de minimis* surface area (for example, more than 1 square foot per room).
- Use good work practices and take precautions to prevent the spread of lead dust (for example, limit access to the work area only to workers; cover the work area with 6 millimeters polyethylene plastic or equivalent; protect workers; protect occupants' belongings by covering or removing them from the work area; wet painted surfaces before disturbing; and wet debris before sweeping).

2. **Perform visual examinations for deteriorating paint** (unless the paint is found not to be lead-based):

- At unit turnover.
- Every 12 months (unless the tenant refuses entry).

3. **Promptly and safely repair deteriorated paint and the cause of the deterioration.** If more than a *de minimis* amount of paint (for example, more than 1 square foot per room) has deteriorated (unless the paint is found not to be lead-based):

- Make the surface intact by stabilization, enclosure, encapsulation, or removal.
- Follow Essential Maintenance Practice #1 (above) when repairing the surface.
- Diagnose and correct any physical deterioration (for example, structural and moisture problems causing substrate failure or conditions causing painted surfaces to be crushed).
- When there is extensive paint deterioration (for example, more than 5 square feet per room), the procedures for dust testing after Standard Treatments apply.

4. **Provide generic lead-based paint hazard information to tenants, per Title X,** including the EPA-developed educational pamphlet and any information available about lead-based paint or lead-based paint hazards specific to the unit.

5. **Post written notice to tenants** asking them to report deteriorating paint and informing them who to contact. Promptly respond to tenants' reports and correct deteriorating paint, with accelerated response in units occupied by a child under age 6 or a pregnant woman, and in no case longer than 30 days. Do not retaliate against tenants who report deteriorating paint.

6. **Train maintenance staff.** At a minimum, maintenance supervisors need to complete a 1-day training course based on the HUD/EPA operations and maintenance/interim control activities curriculum. The maintenance supervisor must ensure that workers either take the 1-day training course or have a clear understanding of lead-based paint hazards, unsafe practices, occupant protection, and dust cleanup methods by such means as on-the-job training and video instruction. The maintenance supervisor needs to provide adequate oversight of workers who have not taken the training course.

Source: *Putting the Pieces Together: Controlling Lead Hazards in the Nation's Housing.* Summary.

Exhibit 2

Standard Treatments

1. **Safely repair deteriorated paint.** The standards set forth in Essential Maintenance Practices apply. (Note that the safe repair of deteriorating paint should have already been done under Essential Maintenance Practices. The same procedures apply to stabilizing deteriorated paint identified in the course of Standard Treatments.)
2. **Provide smooth and cleanable horizontal surfaces.** Rough, pitted, and porous surfaces trap lead dust and are difficult to clean thoroughly. Smooth horizontal surfaces will make it possible for tenants' regular housekeeping to reduce exposure to lead dust (for example, recoating hardwood floors with polyurethane, replacing or recovering worn out linoleum floors, and treating interior window sills). During treatment of an occupied unit, occupants and their possessions must be protected from lead exposure, but only accessible surfaces need to be treated.
3. **Correct conditions in which painted surfaces are rubbing, binding, or being crushed that can produce lead dust (unless the paint is found not to be lead-based).** Owners shall correct conditions that cause rubbing, binding, or crushing of painted surfaces to protect the integrity of the paint and reduce the generation of lead dust (for example, rehanging binding doors, installing door stops to prevent doors from damaging painted surfaces, and reworking windows).
4. **Cover or restrict access to bare residential soil (unless it is found not to be lead-contaminated).** Under Title X, only bare soil that is lead-contaminated is defined as a hazard. Owners shall visually check for bare soil when performing treatments on a unit and implementing controls to prevent occupant exposure (for example, covering bare soil with gravel, mulch, or sod; or physically restricting access to bare soil).
5. **Specialized cleaning.** Lead-contaminated dust, the foremost path of childhood poisonings, may not be visible to the naked eye and is difficult to clean up. Owners shall conduct specialized cleaning of work areas upon completion of the treatments above. During treatment of an occupied unit, only accessible surfaces need to be cleaned.
6. **Perform sufficient dust tests to ensure safety.** When performing Standard Treatments in vacant units, sufficient dust tests are needed following treatment to provide a reasonable assurance of compliance. Dust tests of the work area are to be performed after the completion of Standard Treatments in any unit occupied by a family with a child under age 6 or a pregnant woman if more than a *de minimis* amount of paint is disturbed.

Source: *Putting the Pieces Together: Controlling Lead Hazards in the Nation's Housing.* Summary.

The Task Force recommended that owners of larger apartment developments be given the option of arranging for a certified risk assessor to develop a customized lead hazard control plan. Such a plan would offer economies of scale and could ensure that families with young children receive lead-safe units, making it unnecessary to control hazards in all units. The key elements of a lead hazard control plan are described in exhibit 3.

Exhibit 3

Implementation of a Lead Hazard Control Plan

1. **Commitment to implement Essential Maintenance Practices and to respond both to the presence of a child with elevated blood lead levels and control of identified lead-based paint hazards.**
2. **Strategy for addressing lead-based paint hazards in units with a young child or a pregnant woman.** The plan shall establish a schedule for accelerated action to address lead-based paint hazards in units occupied by families with a child under the age of 6 or a pregnant woman, or units regularly used for childcare.
3. **Protocol for maintenance and cleaning of units at turnover.** The plan shall establish the procedures to be used at unit turnover, such as specialized cleaning designed to remove lead-contaminated dust.
4. **Commitment to evaluate/control lead-based paint hazards in a percentage of units on an expedited schedule.** The plan shall include a written commitment by the owner to make a percentage of units in the property safe from lead-based paint hazards within a specified time period and to give preference to families with young children when leasing these units. In the Lead Hazard Control Plan, the owner would commit to:

- Conducting lead-based paint hazard evaluation/control in a specified percentage of the units in a building based on the building's historical share of units occupied by families with young children.
- Taking appropriate steps to inform families with young children of the availability of hazard-controlled units (for example, participating in a local registry).
- Matching families with young children to available hazard-controlled units.
- Conducting lead-based paint hazard evaluation/controls in additional units if the demand for these units by families with young children exceeds the historical percentage.

5. **Provisions for addressing lead-based paint hazards in common areas of the property.** The plan shall include a strategy for lead hazard control in common areas and other occupied units, based on the results of the risk assessor's report.
6. **Ongoing monitoring schedule.** The plan shall include a schedule for ongoing monitoring by an independent, certified risk assessor, including periodic sampling of lead dust levels to ensure that the property owner is complying with the Lead Hazard Control Plan.

Source: *Putting the Pieces Together: Controlling Lead Hazards in the Nation's Housing.* Summary.

The costs of Essential Maintenance Practices and Standard Treatments are difficult to estimate, because they vary significantly with housing condition, normal maintenance practices, and type of structure. The Task Force's cost estimates focussed on the incremental costs of maintaining housing and preparing it for reoccupancy upon turnover, resulting from the possible presence of lead-based paint and lead hazards. On this basis, the Task Force estimated that controlling lead hazards as part of normal maintenance

would add an average of $50 to $75 a year per unit to maintenance costs for 200-unit properties and $85 to $110 for single-unit properties. Upon turnover of higher priority housing, Standard Treatments would add $105 to $175 to the cost of preparing each unit in a 200-unit structure for reoccupancy and $240 to $330 to the cost for single-unit properties.

Liability Relief

In addition to including these lead hazard control standards in State and local housing codes, the Task Force empathized with the plight of property owners. It recommended that property owners who could document that they were in compliance with applicable hazard control standards be afforded some relief from liability if a resident child were found to have an elevated blood lead level. Such documentation would be based on a report by an independent, certified risk assessor who had visually inspected the property and had tested the levels of lead in household dust and bare soil. Liability relief might take the form of a rebuttable presumption that the owner had exercised due care, a limit on possible damages, or complete immunity from damages. The degree of relief would depend on the extent and likely permanence of the hazard control actions taken.

As a further inducement for property owner compliance, the Task Force recommended that States establish an action for injunctive relief in units whose owners are not in compliance, as well as rebuttable presumptions that would shift the burden of proof to noncomplying owners in lead-poisoning tort litigation.

Liability relief would not be afforded unless some provision were made to ensure prompt remedial compensation for any child whose blood lead level is elevated despite the landlord's compliance with lead hazard control standards. One approach would involve the owner offering to pay for uncompensated medical expenses, relocation to lead-safe housing, and perhaps for any necessary remedial education up to a specified amount. If the child's family accepted the offer, it could not sue for damages. If the family rejected the offer, its rights to damages could be limited.

Insurance and Financing

Responsible owners of rental properties need insurance to cover possible damage awards and the cost of defending against claims that they failed to provide safe housing or that their negligence caused injury to a child. The withdrawal of the insurance industry from insuring against lead-poisoning claims has seriously disrupted the rental housing industry. Renewed availability of insurance protection against such claims would be a significant inducement for control of lead hazards.

The Task Force pointed out that owners who controlled lead hazards in compliance with locally prescribed standards would pose much less risk to insurers than noncomplying owners. Insurers must be able to predict the likely occurrence and severity of claims. The number of claims against complying owners would be greatly reduced, because fewer children would be exposed to lead hazards. Even fewer claims would be expected if legislation limited lead-poisoning claims to cases involving significant elevation in blood lead level, and capping payments would limit the severity of claims. Adoption of these approaches should result in affordable insurance becoming more readily available. Insurers might also base premiums, maximum coverage, or deductible amounts on the extent of hazard control activities carried out by the insured owner.

The Task Force also recommended that lenders and insurers include prescribed lead hazard control standards in their underwriting regulations. Such a policy should make financing and lead liability insurance more available to complying property owners, including owners of housing in low-income neighborhoods. State insurance commissioners have been urged to work with insurance companies to facilitate the availability of affordable lead liability coverage for complying properties.

The private lending industry was also encouraged to develop financing tools to fund lead hazard evaluation and control. Complying owners would have preferred access to these tools. As a practical matter, the Task Force recognized that most private financing would be part of a public/private financing arrangement in which the public financing would be fully subordinated to the private loan. Finally, to remove disincentives to future lending to owners of older housing in distressed neighborhoods, the Task Force recommended that lenders be afforded a grace period during which full compliance with hazard control requirements would be relaxed if they were forced to foreclose on and become the owner of such housing. A grace period is appropriate, because lenders in possession are very vulnerable just after foreclosure, before they have time to correct problems or resell.

Public-Sector Strategies

The Task Force recognized that more accurate and more extensive information regarding lead hazards is needed by all concerned: parents and homeowners, rental property owners and tenants, maintenance workers, painting and renovation contractors, medical professionals, educators, public health professionals, local housing officials and code enforcers, appraisers, lenders, and insurers. By raising awareness of childhood lead exposure problems and solutions, education would increase the impetus for action. While education is no substitute for lead hazard control, steps can be taken to inform caregivers of the ways to lessen children's exposure. Thus, the Task Force recommended an increased education effort as a cost-effective means of preventing lead poisoning.

Because only one in five households includes a child under 6 years of age, it makes sense that families with pregnant women or very young children be matched with lead-safe housing to the extent allowable under fair housing laws. In addition to fostering matching strategies in multifamily housing, the Task Force suggested that local governments develop and maintain registries of lead-safe housing and that housing counseling agencies help young families find such housing.

Lead has been investigated more than any other hazardous material, and existing research has clearly established the damage that results from even low levels of lead in children's blood. However, there is a need for additional research to validate the effectiveness of new and improved techniques for evaluating and controlling lead hazards. Finding more cost-effective techniques should greatly increase voluntary compliance with hazard-control standards.

The Task Force recognized that, as a practical matter, market forces will not induce owners of the estimated 3 million severely distressed housing properties to control lead hazards in their units. Therefore, it recommended that Congress establish a trust fund with a dedicated source of revenue of at least $1 billion a year and that these funds be targeted at rehabilitating severely distressed housing, making it permanently lead safe when economically feasible. If rehabilitation costs would clearly exceed benefits, these funds would go towards moving families with young children into lead-safe housing and the contaminated housing would be condemned.

Remaining Issues

The Task Force has outlined a framework of interrelated, reinforcing strategies that, if fully implemented, should sharply reduce childhood lead poisoning without disrupting the affordable housing market. But, as in all comprehensive programs, many issues still must be resolved by State and local governments and the private sector. Such issues include the cost and effectiveness of lead hazard control measures; the type and amount of testing and monitoring necessary; the availability of trained lead control personnel; and documentation of compliance with hazard control standards.

Cost

The Task Force recommends that owners of all pre-1978 housing carry out Essential Maintenance Practices and that owners of economically viable pre-1950 housing implement additional lead-hazard controls—all without subsidy. As a practical matter, these recommendations would not be carried out unless they were affordable. For housing to be safe for occupancy, all accessible surfaces must be specially cleaned after any lead-based paint is disturbed, not only after lead-hazard control work, but also after any repair or maintenance activities that may disturb surfaces containing lead-based paint. Specialized, costly cleaning will, therefore, be required in millions of housing units. The new HUD Guidelines recommend repeated use of high-efficiency particulate air (HEPA) vacuuming and wet washing with a trisodium phosphate (TSP) solution or other lead-specific solvent. They also recommend cleaning walls and ceilings. Other expensive treatments include window replacement and installation of new siding on exterior surfaces. Questions to be asked include:

- Are all of these steps necessary?
- Would less expensive cleaning protocols provide sufficient protection from lead dust hazards?
- Can encapsulants be developed that will provide lasting protection on exterior surfaces?
- Are there other, less expensive ways to protect children adequately from lead hazards?

Capacity

If lead hazard evaluation and control activity expands as envisioned by the Task Force, the demand for trained, certified paint inspectors, risk assessors, and abatement contractors will greatly exceed the supply. While 22 States have laws providing for training and certification of lead control personnel, many States have not yet fully implemented their programs. EPA offers training courses for inspectors, risk assessors, contractor supervisors, and abatement workers. However, training materials on interim control and repair for maintenance supervisors and workers will not be available until the end of 1996. Can the availability of trained personnel be accelerated?

Using trained and certified lead hazard evaluators, as well as contractors who will take appropriate precautions to protect workers and residents, will generally be more expensive than using untrained persons and firms that cannot be expected to follow safe practices. How can owners be induced to use trained, certified firms to ensure that work is done safely and effectively, thereby saving money in the long run by avoiding liability?

Effectiveness

The Task Force believes that the recommended lead hazard control measures would protect children, but their effectiveness has not been scientifically validated over a long period in various types of housing units. How can the effectiveness of the recommended measures be tested most expeditiously, so that public- and private-sector organizations can take appropriate action to ensure that any necessary changes in recommended hazard control measures are made promptly?

Testing

Paint, dust, and soil testing are important for identifying hazards and determining whether housing is safe for occupancy after hazard control work has been completed. The feasibility of widespread testing will depend in part on its cost. Therefore, it is important to determine whether less costly ways to carry out effective tests are available. Questions include:

- How many units must be tested in an apartment complex to determine whether or not lead-based paint is present?
- How many dust samples must be collected to determine whether a housing unit is safe for occupancy?
- Is it appropriate to composite dust samples for laboratory analysis?
- Is it appropriate to test dust on window troughs to identify lead hazards and to approve a unit for reoccupancy?
- Are there other issues related to testing?

Documentation

For a housing unit to qualify for liability relief, the Task Force recommends that compliance with hazard control standards be documented by an independent, trained, and certified inspector or risk assessor who has performed a visual inspection and dust testing. Such documentation might also be required if the complex is to qualify for financing or liability insurance. How should such documentation be provided?

Ongoing Monitoring

Few of the lead hazard control measures proposed in the Task Force report will remove or permanently cover all lead-based paint surfaces or eliminate all contaminated soil. Thus, potential lead hazards will continue to exist, and ongoing maintenance will be needed if the housing units are to continue to be lead safe.

The Task Force report recommends that annual visual inspections be conducted by the owner and that instructions be given to residents to notify the owner of any paint deterioration. For higher priority units, it recommended at least two evaluations by independent, trained, and certified risk assessors. Any observed hazards were to be controlled promptly. Questions to be asked include:

- Is the recommended ongoing monitoring sufficient?
- Is it excessive?
- At what point, if ever, may monitoring cease?
- What requirements or procedures should be developed to ensure that such a maintenance regime is followed?

Conclusion

Congress, HUD, and EPA have set the stage for effective action to reduce childhood lead poisoning sharply while preserving affordable housing. While much of this responsibility is shifting to State and local governments and the private sector, the recommendations of the Title X Task Force provide the framework for a cooperative effort to solve this critical children's environmental health problem. Federal agencies can continue to play a leadership role by incorporating Task Force standards and policies in their regulations.

Authors

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Notes

1. NHANES III is a survey carried out periodically by the U.S. Department of Health and Human Services. See also Note 1 of Summary.

2. Essential Maintenance Practices and Standard Treatments are lead hazard control procedures recommended by the Task Force. They are described in exhibits in the Task Force report. Exhibits 1, 2, and 3 are taken from that report. Under an agreement with HUD, the National Institute of Building Sciences is developing model code language to make the presence of excessive levels of lead in dust a code violation.

References

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