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PROTECTING CHILDREN FROM LEAD-BASED PAINT POISONING: SHOULD LANDLORDS BEAR THE BURDEN?

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I. INTRODUCTION

Lead-based paint is a serious health hazard to young children. Lead is a toxin, and exposure to lead-based paint can cause lead poisoning. Not only does lead poisoning cause individual human suffering, it also produces significant societal costs. Preventing lead exposure from lead-based paint requires providing a lead-safe environment for children. Depending on the circumstances, prevention entails either abating an actual lead-based paint hazard or taking interim measures to manage a potential lead-based paint hazard. This type of prevention requires action on the part of property owners, occupants, or both, and also may involve significant costs.

This article examines the various legal approaches to reducing children’s exposure to lead-based paint in private rental housing and asks whether those approaches are consistent with economic efficiency. By definition, the most efficient approach is one that minimizes the sum of the costs associated with individuals being poisoned by lead-based paint and the costs incurred to reduce lead-based paint exposure. In conducting the analysis, we note that it is not our pur-
pose to argue that society's sole objective in addressing the lead-based paint problem should be economic efficiency. Rather, we hope to indicate the additional costs incurred if society chooses to address the problem by imposing legal duties that are not efficient.

We assume that the market for rental housing is competitive and that the tenants pay rent that fully reflects the expected cost of residing in the rental housing, including any risks. In this setting, we look at three scenarios, each with different assumptions about whether the landlord or tenant has information regarding the status of lead paint in the housing unit. Under each scenario we examine the efficiency of various assignments of liability between landlord and tenant.

In the first scenario, we assume that prior to occupancy, both the landlord and the tenant have information that lead paint is present in the housing unit. In that scenario, the issue is whether the legal system should impose a duty upon the landlord to abate the lead paint. In the second scenario, the landlord has information about whether lead paint is present in the housing unit, but the tenant does not. The issue in this case is whether the legal system should impose a duty upon the landlord to inform the tenant about the known lead paint risks. Finally, in the third scenario, neither the landlord nor the tenant has information about whether the housing unit contains lead paint. The issue here is whether the legal system should impose a duty upon the landlord to test or inspect for lead.

We approach our analysis by first developing a theoretical framework for determining whether the imposition of the duties outlined above is consistent with economic efficiency. We then review the existing law regarding lead paint in private rental housing and ask whether that law is consistent with our economic analysis. In general, we conclude that the duties imposed by the common law are largely consistent with efficiency, but that the expanded duties imposed on landlords by state and federal statutes in some cases are not consistent with efficiency. As a prelude to the analysis, we next describe the nature of the risk from lead paint in more detail.

II. LEAD-BASED PAINT

A. Scope of Problem

Lead is a poison that adversely affects the body's systems.\(^1\) Lead is especially harmful to children under the age of six, whose nervous system
systems are still developing.\textsuperscript{2} Low levels of lead in the bloodstream have been associated with decreased intelligence, behavioral problems, and developmental deficiencies.\textsuperscript{3} At higher levels, lead can cause brain damage, coma, and death.\textsuperscript{4} Relatively recent research suggests that the level of lead in the blood that can cause negative health effects is even lower than previously thought.\textsuperscript{5} In 1985, the Centers for Disease Control (CDC) considered any blood lead level above 25 micrograms of lead per deciliter of whole blood ($\mu$g/dL) to be a potential problem.\textsuperscript{6} This level therefore marked the threshold for an elevated lead level.\textsuperscript{7} As of 1991, the threshold of concern was lowered to 10 $\mu$g/dL.\textsuperscript{8}

The U.S. Department of Health and Human Services (HHS) has identified lead poisoning as the "number one environmental threat to the health of children in the United States."\textsuperscript{9} For children ages one and two, HHS estimates that 11.5 percent have blood lead levels above 10 $\mu$g/dL, and 0.6 percent have levels above 25 $\mu$g/dL.\textsuperscript{10} For children ages three through five, 7.3 percent have blood lead levels above 10 $\mu$g/dL, and 0.4 percent have levels above 25 $\mu$g/dL.\textsuperscript{11}

There are many sources of lead in the environment besides paint. These sources include leaded gasoline, lead in pipes and plumbing fixtures, lead from industrial emissions, lead-soldered cans, leaded crystal, and some improperly fired pottery with lead-based glaze.\textsuperscript{12} The most common source of lead exposure for children, however, is lead-based paint.\textsuperscript{13}

\textsuperscript{2} Id. at 7.
\textsuperscript{3} Id. at 9–10.
\textsuperscript{4} Id. at 9.
\textsuperscript{5} Id. at 1, 7–8.
\textsuperscript{6} PREVENTING LEAD POISONING, supra note 1, at 1, 7–8.
\textsuperscript{7} Id.
\textsuperscript{8} Id.
\textsuperscript{9} ALLIANCE TO END CHILDHOOD LEAD POISONING, PREVENTING LEAD POISONING: THE FIRST COMPREHENSIVE NATIONAL CONFERENCE: FINAL REPORT A-3 (1991) [hereinafter FINAL REPORT].
\textsuperscript{11} Id.
\textsuperscript{12} See PREVENTING LEAD POISONING, supra note 1, at 17–25.
\textsuperscript{13} Id. at 18.
Children can be exposed to lead from lead-based paint in many different ways. For example, a child might eat paint chips from defective paint surfaces. The primary route for children's exposure to lead-based paint, however, appears to be through the ingestion or inhalation of lead-contaminated dust or soil. Lead can get into dust through normal wear and abrasion of painted surfaces, and also through disruption of painted surfaces during renovation and remodeling activities. Lead can also get into the soil in which children play through the chipping of exterior painted surfaces. Children ingest lead-contaminated dust and soil through normal childlike activity, such as putting their hands, toys, or other objects in their mouths.

Until approximately 1950, lead was used as a primary ingredient in many oil-based interior and exterior house paints. The use of lead in house paint gradually decreased from the early 1950s through the 1970s as latex paint, which typically does not contain lead, became available. Lead-based paint has been used on all types of surfaces, but was used more often on exterior surfaces than on interior surfaces, and more frequently on trim, windows, and doors than on walls and ceilings. The federal government finally banned the use of unsafe levels of lead in house paint in 1978. However, because lead does not decompose and remains potentially hazardous when painted over, lead-based paint applied years ago still poses a problem today. As a general rule, any house constructed before 1978 may contain lead-based paint. The U.S. Department of Housing and Urban Development estimates that 57 million units, or over half of the housing stock in the United States, contains lead-based paint.

\[14\] Id. at 18–19.
\[15\] Id.
\[18\] The Residential Lead-Based Paint Hazard Reduction Act applies to target housing, meaning any housing constructed before 1978. 42 U.S.C. § 4851(b)(27) (1994). This definition excludes housing constructed during or after 1978 because significant levels of lead in paint were prohibited by that time. Lead; Proposed Requirements for Disclosure of Information Concerning Lead-Based Paint in Housing, 59 Fed. Reg. at 54,988.
\[19\] TASK FORCE, supra note 10, at 36 (citing UNITED STATES DEP'T OF HOUSING AND URBAN DEV., COMPREHENSIVE AND WORKABLE PLAN FOR THE ABATEMENT OF LEAD-BASED PAINT IN PRIVATELY OWNED HOUSING: REPORT TO CONGRESS (1990)).
The presence of lead-based paint does not in and of itself create an immediate health hazard. The risk associated with exposure to lead is dependent on the physical condition of the paint and whether there are children occupying the house. Lead-based paint presents an immediate hazard to small children if the paint is in a deteriorating condition, or is disturbed through renovations or constant rubbing. Estimates of the number of housing units containing lead-based paint hazards range from five million to fifteen million. Of those units, approximately one-third are occupied by children under the age of six.

There are many costs associated with childhood lead poisoning, and thus many potential benefits from reducing children’s exposure to lead hazards. Quantifiable costs include medical and special educational expenses, and decreases in productivity and earning. Non-quantifiable costs include declines in the quality of life for children and their families, physical and emotional suffering, and family time spent on caring for poisoned children. There also may be additional benefits associated with lead hazard control, such as an improved housing stock and a reduction in lead-related litigation.

Formerly, the regulatory approach to the lead problem was to address lead exposure only after a child was lead poisoned. This so-called “secondary” or “health” approach is basically a response after the fact, and does nothing to prevent lead poisoning. Recently, public policy shifted towards a “primary” or “housing” approach, where the goal is to evaluate and control lead hazards before a child is lead poisoned. A housing approach to lead-based paint poisoning requires action on the part of the property owners, the occupants, or both.

20 See id. at 36-37.
21 The mere presence of lead, a potential hazard, can become an actual hazard over time. See id. at 37.
22 Id.
23 Id. The Task Force notes that it is difficult to estimate the number of units occupied by children under the age of six at any particular time since families with young children tend to move frequently. The Task Force estimates the number of units with both lead-based paint hazards and children under the age of six to be between four million units and the total number of units containing lead-based paint.
24 See TASK FORCE, supra note 10, at 37-39.
25 Id.
26 Id.
27 Id. at 50.
28 Id.
In addition, the philosophy of how to control lead-based paint hazards also has shifted. The initial reaction of many regulatory programs was to require complete abatement of all lead-based paint in housing units where children reside. Nationally, such undertakings would cost “several hundred billion dollars—a level of investment that vastly exceeds available resources.” Therefore, recent initiatives have redirected the approach to controlling lead-based paint through a combination of abatement and interim control approaches, depending on the degree of hazard and potential exposure. Both of these trends—toward control of hazards prior to contamination and away from complete removal as the primary remedy—are consistent with efficiency.

B. Evaluation of Lead-Based Paint Hazards

Evaluation of a housing unit for lead-based paint hazards entails both an inspection of painted surfaces for the presence of lead as well as an assessment of the health risks that any lead-based paint poses to the occupants of the unit. An inspection is typically done on-site with an X-ray fluorescence (XRF) machine or chemical spot test, or by sending paint chips to an off-site laboratory for analysis. Lead in paint is always a potential hazard, but not necessarily an immediate one. To determine the extent of the hazard, a risk assessment is conducted. A risk assessment entails observing the condition of the paint, evaluating dust and soil samples for the presence of lead, and obtaining information regarding the occupancy of the housing unit by children under the age of six. In residences with children, lead-based paint is considered an immediate hazard if the paint has any of these characteristics:

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29 See Task Force, supra note 10, at ch. 2.
30 Id. at 36.
31 See, e.g., id. at 50–52; see also Alliance to End Childhood Lead Poisoning and Conservation Law Foundation, Model State Law: Lead Poisoning Prevention Act (Sept. 1993) [hereinafter Model Act].
32 See discussion infra section III.
33 42 U.S.C. §§ 4851(b)(6), (b)(12), (b)(25).
34 Certain lead-based paint evaluation and control activities have been defined in recent federal legislation. See Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of the 1992 Housing Bill) [hereinafter Title X], 42 U.S.C. §§ 4851–56 (1994); see also infra section IV.A.2 (further discussing Title X). Title X defines “inspection” as “a surface-by-surface investigation to determine the presence of lead-based paint as provided in section 4822(c) of this title and the provision of a report explaining the results of the investigation.” 42 U.S.C. § 4851(b)(12).
35 Title X defines “risk assessment” as:
(1) chipping, peeling or flaking; (2) is chalking, thereby producing lead dust; (3) is on any part of a window which is abraded through the opening and closing of the window; (4) is on any surface which is walked on (like floors) or is otherwise abraded; (5) can be mouthed by a child (for example, window sills); or (6) is disturbed through repainting or remodeling. 36

C. Control of Lead-Based Paint Hazards

There are various actions that owners or occupants of property containing lead-based paint can take to control lead-based paint hazards and reduce children's exposure to lead. The first approach is referred to as abatement, which permanently controls lead-based paint hazards—but does not necessarily remove all the lead-based paint.37 “Abatement strategies can include the replacement of a component painted with lead-based paint, the enclosure or encapsulation (with an approved encapsulant) of the lead-based paint, the removal of lead-based paint from the building component, and the removal or permanent covering of lead-contaminated soil.”38

The second approach is to take interim controls, which are temporary measures to reduce occupants’ exposure to lead-based paint hazards.39 Such measures include paint stabilization, regularly paint-

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36 PREVENTING LEAD POISONING, supra note 1, at 71.

37 Title X defines “abatement” as:

any set of measures designed to permanently eliminate lead-based paint hazards in accordance with standards established by appropriate Federal agencies. Such term includes—

(A) the removal of lead-based paint and lead-contaminated dust, the permanent containment or encapsulation of lead-based paint, the replacement of lead-painted surfaces or fixtures, and the removal or covering of lead contaminated soil; and

(B) all preparation, clean-up, disposal, and postabatement clearance testing activities associated with such measures.


38 TASK FORCE, supra note 10, at 47.

39 Title X defines “interim controls” as:

a set of measures designed to reduce temporarily human exposure or likely exposure to lead-based paint hazards, including specialized cleaning, repairs, maintenance, paint-
ing all surfaces, specialized dust removal procedures, keeping children away from chewable surfaces, and specialized cleaning with high phosphate cleaners and high efficiency particulate air (HEPA) vacuums. These short-term preventive measures may be insufficient for housing units in which a child with an elevated blood lead level resides. Furthermore, because interim controls do not permanently eliminate hazards, continued monitoring of all lead-based paint surfaces also is necessary. In the event that a potential hazard became an actual one, abatement would be necessary to reduce exposure.

The proper control measures for any given circumstance depend on the costs associated with the risk of exposure in relation to the costs of available control measures. In general, abatement can be quite expensive. Typically, abatement costs are higher than interim controls in the short run. However, because the need for controls may recur over time, whereas abatement involves a one-time cost, interim controls may be costlier in the long run than initial abatement.

One of the problems associated with a legal mandate of evaluation and control activities is the lack of clear guidelines as to what these activities specifically entail, what procedures apply, and who must carry out the control measures. In addition to dictating disclosure and abatement mandates, recent federal legislation requires the U.S. Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Occupational Safety and Health Authority (OSHA) to promulgate regulations to create a hazard evaluation and control infrastructure. EPA is developing standards for conducting Lead-Based Paint (LBP) evaluation and abatement activities that will apply to all types of property, both residential and commercial, public and private. In addition, EPA is developing regulations that require certification of those individuals.

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42 U.S.C. § 4851(b)(13).
40 Preventing Lead Poisoning, supra note 1, at 29-31. The Centers for Disease Control also recommends that parents make sure children get proper nutrition and that parents wash children’s hands, faces, toys, and pacifiers frequently to remove lead dust.
41 See id. at 65.
42 See Task Force, supra note 10, at 43.
43 Lead; Requirements for Lead-Based Paint Activities, 59 Fed. Reg. 45,872, 45,872–73 (to be codified at 40 C.F.R. § 745) (proposed Sept. 2, 1994).
44 Id.
conducting evaluation and abatement activities.\textsuperscript{45} HUD is also developing guidelines for LBP hazard evaluation and control activities in federally supported housing.\textsuperscript{46} EPA also has set forth guidelines for taking LBP into account when renovating and remodeling pre-1978 housing.\textsuperscript{47} Additionally, EPA has issued a memo providing guidance on the levels of lead in paint, dust, and soil that are dangerous.\textsuperscript{48} OSHA has promulgated requirements for the protection of construction workers exposed to lead.\textsuperscript{49} OSHA requirements apply to lead-based paint hazard evaluation and control activities, and remodeling and renovation activities, in both private and public pre-1978 housing.\textsuperscript{50}

III. ECONOMIC ANALYSIS OF LEAD PAINT LIABILITY IN RENTAL HOUSING

An economic analysis of lead paint risk is based on the objective of minimizing the expected costs associated with the risk arising from lead paint contamination. These costs include the expected costs of illness and injury suffered by individuals who ingest lead paint, and the costs of abatement or interim controls aimed at reducing the risk.

A. Overview of the Model

Our conclusions are based on a simple model of damages from lead paint exposure in the context of a landlord-tenant situation, though all of our results apply to the buyer-seller case as well. We assume that the expected damages that a tenant faces increase with the amount of exposure, which in turn increases with the number of periods of tenancy, but which decreases with the amount of interim controls, or precaution, undertaken.\textsuperscript{51} As noted, interim controls in-

\textsuperscript{45} Id.; see also discussion infra section IV.

\textsuperscript{46} NATIONAL CENTER FOR LEAD-SAFE HOUSING, GUIDELINES FOR THE EVALUATION AND CONTROL OF LEAD-BASED PAINT HAZARDS IN HOUSING, prepared for the UNITED STATES DEP'T OF HOUSING AND URBAN DEV. (clearance review draft June 2, 1994).

\textsuperscript{47} OFFICE OF POLLUTION PREVENTION AND TOXICS, UNITED STATES ENVTL. PROTECTION AGENCY, EPA-747-R-002 (Apr. 28, 1994).

\textsuperscript{48} Memorandum from Lynn Goldman, Assistant Administrator, Office of Prevention, Pesticides and Toxic Substances, United States Envtl. Protection Agency to United States Envtl. Protection Agency Office Directors, Guidance on Residential Lead-Based Paint, Lead-Contaminated Dust, and Lead-Contaminated Soil (July 14, 1994).

\textsuperscript{49} 29 C.F.R. § 1926.62 (1994).

\textsuperscript{50} Id.

\textsuperscript{51} This article uses the term “precaution” interchangeably with the term “interim controls.”
clude measures such as keeping children away from contaminated surfaces, regularly cleaning and painting those surfaces, and repairing defective surfaces. For the most part, these activities are under the control of tenants, though landlords can take some precautions too, such as regular painting. An alternative to interim controls, which do not eliminate the risk altogether, is abatement of the lead paint. Optimizing social welfare should guide the choice between pursuing either abatement or interim controls. The socially optimal action is the lower-cost solution. Thus, comparing the one-time cost of abatement to the present value of the expected cost of controls plus the residual risk of damage over the remaining life of the building is necessary.

The conclusions of our analysis are extremely dependent on the determination of the equilibrium rent for the unit. We assume that tenants pay a rent that reflects the consumption benefit of the unit, or the "risk-free" rent, less any costs that tenants expect to bear as a result of the residual risk, assuming non-removal of the contamination. The expected costs include the anticipated cost of interim controls and any expected harm. Thus, we assume that the rent fully reflects, or "capitalizes," the tenant's expected cost of residing in the unit. This manner of rent determination generally captures the market's adjustment to reflect the risks of occupying a given unit, as perceived by tenants. This rent valuation presumes rationality of market participants given the information that they possess.

As noted, an important factor affecting both the risk and cost of occupying a contaminated unit is the extent to which tenants undertake interim controls. Thus, the anticipated behavior of tenants will affect the market rent. In this regard, we make the crucial assumption that landlords generally cannot monitor tenant-specific actions once occupancy begins, or at least that landlords cannot verify their observations in court. Because the market anticipates this relationship, the equilibrium rent will only reflect the actions that tenants actually have an incentive to undertake, in light of the prevailing liability rule. In other words, we assume that prior to occupancy tenants cannot make credible commitments to take more precaution than is consistent with their incentives once occupancy commences. Moreover, the landlord cannot compel tenants to take precautions because the landlord is unable to monitor tenant activity. This assumption will have important implications for our results. This analysis is inapplicable, however, if the lead is abated prior to occupancy. If the lead is abated
prior to occupancy, the rent equals the risk-free rent because monitoring the interim controls taken by tenants is unnecessary.

The availability, prior to occupancy, of information about the presence or absence of lead contamination also will be an important factor in our analysis. We will consider three scenarios regarding who has information about the risk. In the first scenario, prior to occupancy the landlord and tenant are both aware of the presence of lead contamination. On these facts, the primary issue we examine is what duties the landlord and tenants ought to owe to reduce the risk from the known lead hazard. In the second scenario, the landlord has information about the presence or absence of contamination, but the prospective tenant does not. Here, the issue is whether the landlord should have a duty to inform the tenant about known risks. In the final scenario, neither party has information about whether the unit is contaminated, though the landlord and tenants are aware of the possibility of a risk. Here, the issue is whether the landlord should have a duty to test or inspect for lead.

B. Both Parties Informed About the Risk

We first consider the case where both the landlord and tenant are aware of the presence of lead contamination in the unit. We begin by characterizing the socially optimal, or cost minimizing, response to the risk, and then ask whether specific allocations of liability for the risk can achieve this result.

1. Social Optimum

Consider a situation in which a series of tenants will occupy a contaminated unit over that unit's lifetime. The efficiency question concerns the choice between one-time abatement of the lead paint and period-by-period controls. Making the efficient choice entails a two-step process. First, given non-abatement of the paint, we ask what is the efficient level of tenant precaution. To find this level within each period, minimize the sum of the cost of precaution plus the expected risk of injury, accounting for the cumulative effects of exposure if tenants plan to occupy the unit for multiple periods. The optimal

52 Medical studies indicate that the accumulated amount of lead in the body, rather than periodic exposures, determines risk. See generally DEPARTMENT OF HEALTH AND HUMAN SERVICES, CASE STUDIES IN ENVIRONMENTAL MEDICINE: LEAD TOXICITY (1990).
level of precaution equates the cost of taking one additional unit of precaution with the reduction in expected risk achieved by that last unit. In general, some residual risk will remain at the optimum because achieving zero risk probably will require an excessive investment in precaution.

Summing the resulting costs of precaution and residual risk over the remaining life of the building, with appropriate discounting, yields the minimized present value of costs of non-abatement. We compare this cost to the one-time cost of abatement, which eliminates the risk forever after, to determine which option is cheaper—abatement now or non-abatement coupled with optimal precaution. We do not have to consider other options involving abatement at later dates if we assume time-invariant parameters because it is always optimal either to abate the contamination now, or never to abate the contamination.53 For the purposes of the analysis of the liability rules in the next section, which option is preferable in a given situation does not matter; all that matters is that one or the other is necessarily not optimal.

2. Liability Rules

We focus on negligence rules for assigning liability for lead contamination. The question is, under negligence rules, what are the legal duties of landlords and tenants. Consider the following possibilities: a strict duty to abate by the landlord, a duty by the landlord to undertake efficient abatement, a duty by tenants to take efficient precaution, and no duty to abate by the landlord.

a. Strict Duty to Abate by the Landlord

We first consider the outcome when the landlord has a strict duty to abate lead contamination prior to occupancy of a unit, regardless of the cost. Under this rule, if the landlord fails to abate the contamination, the landlord will be strictly liable for any injuries suffered by tenants. If the landlord does abate the contamination, the landlord incurs the one-time cost of abatement and then charges all tenants the risk-free rent. The expected return is therefore the present value of the risk-free rental stream minus the one-time cost of abatement.53 This conclusion is not strictly true in the presence of cumulative effects of exposure, but allowing an expanded set of options does not alter our basic results. See Thomas J. Miceli, Katherine A. Pancak, & C.F. Sirmans, An Economic Analysis of Lead Paint Laws, J. REAL EST. FIN. & Econ. (forthcoming Jan. 1996).
Alternatively, suppose that the landlord does not abate the contamination. The question then becomes how much precaution tenants will undertake against the risk. Tenants generally will not have an incentive to invest in precaution because the landlord, having breached a duty to abate, is strictly liable for any injuries the tenants subsequently suffer. Intuitively, given the landlord's breach of duty, the promise of full compensation for tenants creates a moral hazard problem that results in underinvestment in precaution. As a result, period-by-period costs are not minimized. In this case, the landlord's expected return is the present value of the risk-free rental stream less the expected liability for damages.

In deciding whether to abate lead contamination, a landlord will compare the expected return from abatement and non-abatement. Because the rental stream is the same under each, the landlord will choose the option that minimizes cost. Although either option is a possible choice, the landlord will tend to choose abatement too often from a social perspective. The reason is that the expected liability in the event of non-abatement exceeds the minimized value of period-by-period costs (i.e., the expected liability if tenants had taken optimal precaution) given that tenants chose no, or too little, precaution. Thus, there may arise cases where abatement is costlier from a social perspective given minimized period-by-period costs, but cheaper from the landlord's perspective. Consequently, a duty to abate by the landlord will not always lead to the efficient abatement choice because tenants need not internalize the risk from exposure.

b. Duty by the Landlord to Undertake Efficient Abatement

As an alternative to an unqualified duty to abate, we next consider a duty by the landlord to undertake efficient, or "reasonable" abatement. In contrast to a strict duty to abate, this rule will lead to an efficient outcome. The landlord will abate the lead when efficient to do so in order to avoid liability; the landlord will not abate the lead when inefficient to do so because negligence rules will not hold the landlord liable for subsequent injuries. On the other hand, tenants face no risk when the landlord abates the lead; when the landlord does

54 The landlord earns the risk-free rent because tenants are fully insured against any risk.
55 It is well known in the law and economics literature that a negligence rule with the due care level set equal to optimal precaution induces the efficient choice of precaution. See generally Steven Shavell, Economic Analysis of Accident Law (1987); William Landes & Richard Posner, The Economic Structure of Tort Law (1987).
not abate the lead, the tenants face full liability for their own injuries and therefore will take optimal precaution. Although this rule appears more efficient than a strict duty to abate, implementing the rule is more costly because a court needs to determine when abatement is cost-effective.

c. Duty by Tenants to Take Precautions

An efficient outcome is also achieved by a negligence rule that imposes a duty on tenants to take reasonable, or efficient, precautions. Under this rule, tenants will choose optimal precaution, given non-abatement, in order to avoid liability. Moreover, because tenants avoid liability by satisfying the due-care standard, they will pay the risk-free rent, less their cost of precaution. Thus, if the landlord does not abate the lead, the expected return is the risk-free rent, discounted by the optimal cost of precaution, minus the expected liability that he must pay tenants in the event of an injury. Therefore, the landlord will make the abatement decision by comparing the minimized cost of precaution plus damages to the one-time abatement cost, which is the efficient comparison. This rule, however, requires a court, after the fact, to determine the level of precaution that tenants actually undertook. This fact finding is a task even more difficult than determining when abatement is efficient, given that tenant precaution probably will be difficult to observe, especially because injuries from lead paint exposure can take years to manifest themselves.

d. No Duty to Abate by Landlords

Finally, we consider a rule that imposes no duty on landlords at all. Surprisingly, this rule also leads to an efficient outcome. Under this rule, if a landlord does not abate contamination, tenants are fully liable for their own injuries. Thus, tenants have an incentive to choose optimal precaution and thereby minimize expected costs; that is, the rule eliminates the moral hazard problem.

As for the landlord's abatement decision, one might first think that, because the landlord is not liable for any injuries suffered by tenants,

56 Strictly speaking, this rule represents a contributory negligence defense for landlords.
57 It is possible to combine the duty for tenants to take reasonable precaution with a duty by the landlord to undertake reasonable abatement. This negligence rule with a defense of contributory negligence is also efficient. See generally Shavell, supra note 55; Landes & Posner, supra note 55.
there will be no incentive to abate the lead paint—an inefficient result. However, this result is not the case. The result differs on account of the impact of tenant liability on rents. In particular, a landlord can choose not to abate lead and incur no abatement costs. The rent the landlord can charge, however, will be discounted by the expected costs borne by tenants, which will reflect the efficient level of precaution. On the other hand, a landlord can choose to abate the lead and incur a one-time cost. In this case, however, the landlord can charge the risk-free rent. In weighing the two options, the landlord will therefore compare the one-time abatement costs to the present value of the tenants' optimal abatement cost plus residual risk—as reflected in the discounted rent—which coincides exactly with the social criterion for abatement. Thus, the landlord will make the efficient choice.

e. Summary

This section has shown that the following liability rules all achieve an efficient result: a duty for the landlord to undertake only efficient abatement, a duty for tenants to take efficient precaution when the lead is not abated, and no duty for the landlord. In contrast, a rule imposing an unqualified, or strict duty on the landlord to abate the lead generally is not efficient. Efficient rules differ with regard to the costs of administration and the distributional implications. For example, a rule of no landlord duty is the cheapest of the three to administer because that rule involves the least fact-finding by the court. Some may object, however, that this rule imposes liability on tenants who lack the resources to bear the cost. Counteracting this problem is the access most individuals have to health insurance of some kind. Such insurance, however, may create the same threat of moral hazard that arose from a strict duty to abate by landlords. On the other hand, only the "tenant negligence rule" imposes liability on the landlord in an efficient equilibrium. However, this rule is probably the most costly rule to administer because of the high fact-finding costs.

C. Landlord Informed About the Risk

An important extension of the above model involves the case where the landlord has knowledge of the presence of lead paint contamination but prospective tenants do not. The primary question in this

58 See generally Steven Shavell, On Moral Hazard and Insurance, 93 Q. J. Econ. 541 (1979).
context is whether the landlord should have a duty to notify tenants about the risk. If the landlord chooses to inform tenants about the risk initially, the situation becomes identical to that in the previous section, and the conclusions there remain valid. Moreover, if the landlord opts for the abatement option, when efficient, the landlord need not actually inform tenants about the risk. Thus, the notification issue is relevant only when abatement is not optimal.

The presence of private information gives the landlord an option not available in the previous case—namely, to withhold the information. Under a duty to notify, however, the landlord will never withhold the information if the landlord plans not to abate the lead. This result occurs because if tenants receive no notification from the landlord, their response will be to take no, or too little, precaution. The tenants will forego precaution either because they presume there is no risk, or because they know that they will be compensated fully for any damages they suffer as a consequence of the landlord's breach of duty, again succumbing to the moral hazard problem. As a result, the landlord's expected return from the non-abatement option is not maximized. In contrast, if a landlord notifies tenants of the risk before occupancy, the tenants have an incentive to invest optimally in precaution, thereby lowering overall costs and increasing the landlord's expected return. This conclusion assumes that the landlord does not have a strict duty to abate the lead and that the cost of notification is small.

On the other hand, in the absence of a duty to notify, the landlord is not liable for tenants' damages, even if the landlord does not inform them of the risk before occupancy. Nevertheless, landlords of uncontaminated units will always have an incentive to reveal that fact so that they can charge the risk-free rent. Landlords of contaminated units, in contrast, would like to withhold that fact. Thus, tenants could, in theory, infer from a landlord's silence that a unit is contaminated. If this inference is always correct, then a duty to notify is unnecessary.

In reality, however, tenants probably will not be able to infer a unit's status perfectly. The inference may be difficult because landlords are able to misrepresent the status of their units, because some landlords are uninformed, or because some tenants are simply unaware of the possibility of risk. In the absence of a duty to inform, a landlord who knows a unit is contaminated can succeed in increasing return by

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59 We assume landlords can verify the status of their unit.
withholding that fact. As a result, tenants generally will underinvest in precaution and landlords will therefore choose abatement too infrequently from a social perspective. As a result, a duty to notify is the preferable rule.

D. Both Parties Uninformed About the Risk

The final case is where neither the landlord nor the tenant has information about the risk. That is, neither party knows whether a unit is contaminated, although the landlord, and possibly the tenant, is aware of the potential risk. The question here is whether to expend resources to determine the presence or absence of risk. Because testing is costly, expending resources may or may not be socially desirable, depending on the perceived likelihood of contamination. Thus, the question in this context is whether the landlord should have a duty to inspect, or test, for lead contamination. In other words, the issue is whether a landlord should be liable under a "should have known" standard even when the landlord did not learn about the risk.

Our conclusion is that imposing a duty to test on the landlord is generally unnecessary in order to achieve the efficient outcome regarding testing, given that the landlord has a duty to notify the tenants about the results of any test actually performed. The reason that the landlord will test efficiently in the absence of a duty to do so is because the landlord will fully internalize the costs and benefits of the test. The landlord internalizes the cost by paying for the test, and likewise internalizes the benefits by communicating the true nature of the risk to tenants. The benefit accrues to the landlord because the tenants will then be induced to choose the efficient level of precaution—zero precaution if there is no risk, and a positive amount of precaution if there is risk. The tenant's response in turn increases the landlord's expected return by lowering overall expected costs and thereby increasing the rent tenants are willing to pay in equilibrium.

Therefore, once the landlord conducts the test, the situation is identical to the case in the previous section where the parties were asymmetrically informed and the landlord has a duty to notify. On the other hand, imposing a duty to test on the landlord, or equivalently,

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60 In the absence of information, tenants will choose a level of precaution based on their best estimate of the risk. It is easy to show, however, that expected costs are lower when tenants can respond to the true risk level. See Miceli, Pancak, & Sirmans, supra note 53; Steven Shavell, Liability and the Incentive to Obtain Information About Risk, 21 J. LEGAL STUD. 259, 260 (1992).
a “should have known” standard, could have the effect of inducing excessive testing. The reason, again, is that under such a standard, tenants will have a reduced incentive to take precaution after occupancy because a landlord who did not test would be strictly liable for any damages. A duty to test will only be efficient if qualified by a reasonableness requirement, for example if landlords only have a duty to undertake cost-justified efforts to ascertain the risk (a “reason to know” standard). Below, we suggest that common law standards for testing are basically consistent with this distinction between a duty to test reasonably, which is efficient, and an unqualified duty to test, which is inefficient.

E. Qualifications

The above results suggest that landlords should have a legal duty to notify tenants of private information about the presence of lead contamination and, at most, duties for reasonable abatement and testing. These conclusions arose from the need to confront tenants with responsibility for their injuries so as to induce optimal precaution in those cases where abatement is not optimal, and from the assumption that the market rent fully reflects, or capitalizes, a tenant’s cost of occupying a given unit. In the context of our model, imposing further duties on the landlord only serves to reduce efficiency.

There are several qualifications of our simple model, however, that might alter these conclusions. First, legal restrictions on the extent to which tenants can do alterations on their units might limit the tenants’ ability to undertake efficient precautions, such as painting or repairing surfaces. This factor does not affect our results, however, if landlords and tenants can bargain at low cost over such alterations. Second, if tenants are risk-averse, landlord liability might be desirable from a risk-sharing perspective because landlords may be better able to acquire market insurance against lead paint injuries or to self-insure, and then pass the cost on to tenants through rent.

Third, some tenants of contaminated units may be unresponsive to or misperceive known risks. As a result, these tenants may underinvest in precaution even when fully informed about the risk.61 In this case, requiring abatement of the contamination may be a “second-

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best” solution, at least until tenants can be educated better about the risks of exposure to lead paint. In any case of required landlord abatement, however, there exists the important possibility that landlords simply may abandon their units rather than face the cost of abatement or strict liability for damages. Clearly this possibility is important to policymakers concerned with the supply, as well as the safety, of low-income rental housing, and may in some cases argue for public financing of lead paint abatement.

IV. LEAD PAINT LAWS

With the conclusions from the economic analysis in mind, we now turn to an examination of actual lead paint laws. The legal system has approached the problem of reducing children’s exposure to lead paint in private rental housing by imposing legal duties upon landlords to protect tenants from lead-based paint hazards, rather than upon tenants. There is no universal set of legal guidelines for landlords, however, on how to protect tenants and avoid liability. Standards of care for landlords have been both evolving on a case-by-case basis in state courts, and emerging from state legislation and municipal ordinances. In general, these duties range from notifying potential tenants of hazards prior to leasing, to inspecting for the presence of lead and evaluating hazards, taking interim controls and precautions, abating immediate lead paint hazards, and abating not only actual, but all potential lead paint hazards.

Due to the relatively recent enactment of extensive legislation in the area of lead paint, most cases addressing the liability of landlords for a tenant’s child’s lead-based paint poisoning have been decided on common law negligence principles. The following elements must be present in order for a landlord to be found liable to a tenant under negligence: (1) the landlord must be under a duty to protect the tenant, or the tenant’s child, from injury, (2) the landlord must have breached that duty, (3) the tenant’s child must have suffered actual injury or loss, and (4) the landlord’s breach of the duty must have been the proximate cause of the injury or loss. Although all elements must be proven, the primary element discussed in the lead-based paint

64 See id.
poisoning cases is whether or not the landlord had a duty to protect the tenant's child.65

The following section first examines whether landlords have a duty to disclose lead-based paint hazards. Next, we discuss whether landlords have a duty to control or abate lead-based paint hazards.

A. Disclosure

1. Common Law Duties of Disclosure

At common law, landlords owe to tenants a duty of disclosing a dangerous condition on rented property if the landlord knows or has reason to know of the condition and the tenant is not aware of the condition.66 Landlords have been held negligent for failure to disclose according to the principle set out in section 358(1) of the Restatement (Second) of Torts:

[a] lessor of land who conceals or fails to disclose to his lessee any condition . . . which involves unreasonable risk of physical harm to persons on the land, is subject to liability to the lessee . . . for physical harm caused by the condition after the lessee has taken possession if (a) the lessee does not know or have reason to know of the condition or the risk involved, and (b) the lessor knows or has reason to know of the condition, and realizes or should realize the risk involved, and has reason to expect that the lessee will not discover the condition or realize the risk.67

Courts have found that the presence of lead-based paint hazards is a dangerous condition, although there are disparate judicial views as to what actually constitutes the dangerous condition. In some cases, a painted surface that contained lead constituted the condition.68 In other cases, the dangerous condition was defective paint, defective lead-based paint, or the fact that defective lead paint could injure

65 In order to collect damages for lead-based paint poisoning, a plaintiff must not only show the violation of a duty and resultant elevated blood lead level, but also that a loss has been suffered. In Dickerson v. Little, No. 294779, 1992 Conn. Super. LEXIS 1674, at *2 (Conn. Super. Ct. June 3, 1992), a tenant's child had an elevated blood lead level. Although there was lead-based paint present in the apartment in violation of state landlord-tenant law and in violation of a municipal ordinance, the child suffered no cognitive loss. Id. at *7. The court found the landlord liable for violations of the statutes, but the tenant was only entitled to nominal damages. Id. at *8. The court stated that "the right to recover substantial damages requires a showing of actual, as opposed to a mere technical injury." Id.
66 See Restatement (Second) of Torts § 358(1) (1965).
67 Id.
68 See, e.g., Dickerson, 1992 Conn. Super. LEXIS 1674, at *1.
Defining the dangerous condition has been important for determining what knowledge the landlord possessed. Courts have approached the question of what constitutes the condition by asking (1) whether the landlord had knowledge of the presence of lead in the paint, (2) whether the landlord knew that the paint was defective, or (3) whether the landlord should have known that defective lead paint presented a hazard to young children.

In the majority of cases, liability attached only when the landlord actually knew of the lead in the paint and failed to disclose this fact to the tenant. For example, in Norwood v. Lazarus, two landlords owning two different premises were sued by a tenant who resided in both. The Missouri Court of Appeals found the first landlord liable because he had knowledge of lead in the paint. The court found the second landlord liable because he oversaw the purchase of the paint, and therefore must have known of the paint's contents. In contrast, however, a handful of courts have stated that the dangerous condition is more than the presence of lead itself—that knowledge alone would not be sufficient to find a landlord liable. For example, in Dunson v. Friedlander Realty, the Alabama Supreme Court stated that even if the landlord knew of the presence of lead paint, the landlord did not know that the tenant's children would be injured by the paint, and therefore could not be held liable for failure to disclose.

In the majority of negligence suits against landlords, there is no evidence that the landlord had actual knowledge of the presence of lead in paint on the property. Actual knowledge is not a prerequisite to liability, however, because landlords have a duty to disclose dangerous conditions that they have a "reason to know." Therefore, the primary issue in these cases is whether the landlords could "reasonably foresee" that painted surfaces on the property contained lead, and that the lead-based paint was a potential hazard to children.

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70 See infra notes 72–105 and accompanying text.
71 Id.
72 See, e.g., Norwood v. Lazarus, 634 S.W.2d 584, 588 (Mo. Ct. App. 1982).
73 Id. at 585–86.
74 See id. at 588.
75 See id.
76 See, e.g., Dunson v. Friedlander Realty, 369 So. 2d 792, 795 (Ala. 1979).
77 Id.
78 See, e.g., Richwind Joint Venture 4 v. Brunson, 645 A.2d 1147, 1156 (Md. 1994).
79 See id.
the past, some cases found that a landlord could not reasonably foresee a tenant's lead poisoning because the presence of lead in paint and the hazards of lead-based paint were not common knowledge.80

In *Hayes v. Hambruch*, a grandchild of the tenant became lead poisoned in 1978 due to flaking lead paint on the leased property.81 The court granted a motion for summary judgment in favor of the landlord on negligence allegations.82 Although there was evidence that the landlord knew of flaking paint, there was no evidence that she knew that the paint contained lead.83 The United States District Court for the District of Maryland held that knowledge of the existence of flaking paint was not sufficient "reason to know" of the dangerous condition created by flaking lead paint.84 The court based its holding on the requirement of foreseeability.85 The court reasoned that if the landlord was not aware of the existence of lead in the paint, then the "landlord cannot be expected to reasonably foresee the lead poisoning of a child living on those premises."86

The *Hambruch* court relied on two earlier cases in order to arrive at its holding.87 In one case cited in *Hambruch, Garcia v. Jiminez*, the landlord was not aware of the presence of lead on the painted surfaces.88 In *Garcia* the Illinois Appellate Court stated:

> [i]n our opinion, paint chips, like dirt, coins, stones, or other objects that children may place in their mouths, are not in and of themselves sufficient as a matter of law to establish the dangerousness that makes an injury foreseeable and creates a duty to remedy. However, the actual or constructive knowledge that the paint chips contain toxic substances, such as lead, combined with the actual or constructive knowledge that a child may ingest those paint chips, will create such a duty.89

Similarly, in the other case cited by *Hambruch, Winston Properties v. Sanders*, the landlord had actual knowledge of the peeling paint.90 In finding for the landlord, the Ohio Court of Appeals reasoned that

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80 See, e.g., Dunson, 369 So. 2d at 795.
82 Id.
83 Id. at 711.
84 Id.
85 Id.
86 Hambruch, 841 F. Supp. at 711.
87 Id.
89 Id. at 1359.
the knowledge of defective paint was not the same as knowledge of the presence of lead-based paint. The Ohio Court of Appeals followed similar reasoning in *Rice v. Reid*, upholding summary judgment for the landlord because the landlord had no notice that the paint contained lead, although he knew that the paint was peeling. In *Acosta v. Irdank Realty Corp.*, however, the New York Supreme Court held that a landlord who knew that paint in rented property was defective could be liable for a tenant’s child's lead poisoning, because to foresee that a child would eat paint chips was not unreasonable.

The *Hambruch* court noted the significance of the lead poisoning’s occurrence in the mid-1970's, because lead poisoning was not a well-known problem at that time. Therefore, the court found that for the landlord to be unaware of the potential dangers resulting from flaking paint was not unreasonable. The court pointed out that a different result may have been reached if the tenant could show that the landlord should have known about the potential for lead poisoning.

In a recent case, *Richwind Joint Venture 4 v. Brunson*, the Court of Appeals of Maryland found that the landlord should have known of the potential dangers of lead in an older dwelling, even though he did not have actual knowledge of the presence of the lead. The court found that a landlord and property manager had “reason to know” of the potential dangerous condition, if those parties (1) were aware of the peeling paint, (2) knew the house was old, and (3) knew that older homes often contained lead-based paint. The court defined “reason to know” to mean that

the actor has knowledge of facts which a reasonable man of ordinary intelligence or one of the superior intelligence of the actor would either infer the existence of the fact in question or would regard its existence as so highly probable that his conduct would be predicted upon the assumption that the fact did exist.

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91 Id.
95 Id.
96 Id. at 712.
98 Id.
99 Id. at 1154.
Significantly, the court differentiated "reason to know" from "should know," given that the latter imposes a duty to ascertain.100 Other courts, however, have been hesitant to hold a landlord liable where the landlord had no actual knowledge of the presence of lead.101 In *Felton v. Sprately*, a tenant's child became poisoned in 1987, and the complaint alleged that because hazards of lead-based paint were commonly known at that time, the landlord had reason to know of the danger:102 The Pennsylvania Superior Court, however, refused to impute constructive knowledge to the landlord, because that would amount to a duty to inspect, which the court would not impose.103 Furthermore, in *Underwood v. Risman*, the landlord was an experienced real estate broker who admitted to a general knowledge that older homes contain lead-based paint and that lead-based paint was a health hazard to children.104 The Massachusetts Supreme Judicial Court refused to hold the landlord liable for nondisclosure based upon a suspicion or likelihood of knowledge rather than actual knowledge.105

Because the hazards of lead-based paint are more well known today, courts are more likely to find that a landlord should reasonably foresee both the presence of lead paint in dwellings built before 1978, and the potential injury that lead paint, particularly lead paint in a defective condition, may cause.106 More important than the evolution of the reasonably foreseeable standard under common law, however, is the emergence of lead legislation imposing standards of care on property owners.107 Much of this new legislation dictates the disclosure and hazard control actions that property owners must take and provides damages to injured parties.108 Thus, the question of whether injuries were reasonably foreseeable may now be moot.

100 *Id.*


102 *Felton*, 640 A.2d at 1360.

103 *Id.* at 1365.


107 See Richwind Joint Venture 4, 645 A.2d at 1151–53.

Under the common law theory of negligence, a landlord arguably would not be liable for failure to disclose a dangerous condition if the tenant were aware of the condition.\textsuperscript{109} Whether this principle would hold in statutorily authorized lead-based liability suits is unclear.\textsuperscript{110} Landlords could allege a special defense based on comparative negligence if a parent did not monitor a child properly, did not take appropriate precaution, or knowingly rented an apartment containing lead-based paint.\textsuperscript{111} As a general rule, however, the negligence of a parent is not imputed to the parent’s injured minor child.\textsuperscript{112} In \textit{Diaz v. Tavares}, the Connecticut Superior Court disallowed the landlord’s use of a comparative negligence defense in a lead poisoning case without getting into the alleged acts of parental negligence.\textsuperscript{113} The court stated that “a child injured by the negligence of another person is not barred of his remedy by the mere fact that the negligence of his parents contributed to produce the injury.”\textsuperscript{114} Similarly, in \textit{Richwind Joint Venture 4}, the court noted that even if the lead-poisoned children’s mother possessed knowledge about the presence of lead-based paint in their apartment, “that fact would not be relevant because the contributory negligence of a parent is not imputed to the child.”\textsuperscript{115} The court further reasoned that a tenant parent’s negligence bars recovery only where the parent’s negligence is an independent and superseding cause of the child’s injuries.\textsuperscript{116}

In general, recent cases suggest that the common law duty of disclosure coincides with efficiency in that the landlord has a duty to disclose only known or “reasonably knowable” hazards, the latter being those discoverable at reasonable cost.\textsuperscript{117} Courts have been reluctant, however, to extend the duty of disclosure to a “should have known” standard, because such an extension would impose a duty to discover on the landlord.\textsuperscript{118}

\textsuperscript{109} See \textit{Richwind Joint Venture 4}, 645 A.2d at 1154.

\textsuperscript{110} See id. at 1156–57.

\textsuperscript{111} See id. at 1154–57.


\textsuperscript{113} Id.

\textsuperscript{114} Id.

\textsuperscript{115} \textit{Richwind Joint Venture 4}, 645 A.2d at 1156 n.8.

\textsuperscript{116} Id.

\textsuperscript{117} See id. at 1156; Hayes v. Hambruch, 841 F. Supp. 706, 711 (D. Md. 1994).

\textsuperscript{118} See discussion infra section IV.B.1 (elaborating on the duty to discover).
2. Statutory Duty to Disclose

Recent federal legislation greatly expands a landlord’s duty to disclose lead information. The Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of the 1992 Housing Bill) [hereinafter Title X] requires landlords of “target housing” to give certain lead information to potential tenants. Title X also requires EPA and HUD to promulgate disclosure regulations in target housing that is offered for sale or lease. Target housing is defined as any housing constructed prior to 1978.

The purpose of the disclosure rule is to ensure that potential purchasers and tenants are aware of potential lead-based paint hazards in target housing. In the context of leasing, Title X applies to all residential leases of target housing that involve a written contract. Title X applies to neither informal renting agreements that do not involve a lease, because enforcement would be difficult, nor renewals of existing leases, as long as the tenant previously received the information.

Section 4852d requires landlords of target housing to provide tenants with a lead information pamphlet, and to disclose any known lead-based paint or lead-based paint hazard in the housing. Disclo-
sure must occur before tenants are obligated to lease.\textsuperscript{128} Additionally, disclosure and acknowledgement forms must be attached to all leases.\textsuperscript{129} These disclosure requirements apply regardless of the presence of lead-based paint hazards in the housing.\textsuperscript{130} Where a landlord is represented by an agent in the lease transaction, the agent must ensure compliance with the above requirements.\textsuperscript{131}

The pamphlet that landlords must provide to tenants is entitled "Lead Paint: Protect Your Family."\textsuperscript{132} EPA is developing the pamphlet.\textsuperscript{133} EPA and HUD have stated that

\begin{quote}
[a] primary function of the pamphlet is to educate families on the potential health risks associated with lead exposure and ways to avoid such exposure. By requiring that families receive the pamphlet at the beginning of the real estate transaction, Congress ensured that families would be informed about lead-based paint issues during the transaction process.\textsuperscript{134}
\end{quote}

Title X provides for significant penalties for noncompliance with its disclosure requirements.\textsuperscript{135} Any landlord, or real estate agent representing a landlord, will be liable to an injured tenant for money

\begin{footnotesize}
\textsuperscript{128} 42 U.S.C. § 4852d(a)(1).
\textsuperscript{129} Lead; Proposed Requirements for Disclosure of Information Concerning Lead-Based Paint in Housing, 59 Fed. Reg. at 54,991. This form, entitled "Disclosure and Acknowledgement of Lead-Based Paint Before Lease" will be produced jointly by HUD and the EPA. The form is divided into four parts: (1) a general notice statement, (2) a certification of disclosure statement by the lessor, (3) a certification of disclosure statement by the agent (if one is involved), and (4) an acknowledgement statement by the lessee. The EPA and HUD have proposed that the general notice read as follows:

[a] residential structure built prior to 1978 may present exposure to lead from lead-based paint. This exposure may place young children at risk of developing lead poisoning. Lead poisoning in young children can produce permanent neurological damage, including learning disabilities, reduced intelligent quotient, behavioral problems, and impaired memory. Lead poisoning also poses a particular risk to pregnant women. The lessor of any residential dwelling is required to provide the lessee with any information on lead-based paint hazards from risk assessments or inspections in the lessor's possession and notify the lessee of any known lead-based paint hazards.

\textit{Id.}

\textsuperscript{130} Id. at 54,985.
\textsuperscript{131} Id. at 54,986.
\textsuperscript{132} Id. at 54,989.
\textsuperscript{133} Id. at 54,984, 54,989–90. The EPA has developed a draft pamphlet. See Lead Hazard Information Pamphlet; Notice of Availability, 59 Fed. Reg. 11,119, 11,119 (Mar. 9, 1994). The final pamphlet will be available through the United States Government Printing Office for a nominal fee. The EPA and HUD also are working on additional distribution methods.
\textsuperscript{134} Lead; Proposed Requirements for Disclosure of Information Concerning Lead-Based Paint in Housing, 59 Fed. Reg. at 54,989.
\textsuperscript{135} 42 U.S.C. § 4852d(b)(3).
\end{footnotesize}
damages equal to three times the amount of actual damages incurred, plus attorneys' fees. Furthermore, any landlord or agent that violates a disclosure requirement will be subject to fines of up to $10,000 for each violation. The law specifically states, however, that violation of Title X's disclosure requirements will not affect the validity or enforceability of any lease. Title X specifies these disclosure requirements are to take effect three years after enactment, on October 28, 1995. EPA and HUD have intimated that this deadline will not be met.

These disclosure requirements give prospective tenants information that they otherwise may not have had, or been able to obtain, about both lead-based paint hazards in general and about the particular property the tenants are considering renting. Inasmuch as disclosure requirements correct a market imperfection attributable to misperceptions or lack of information, the regulations promote economic efficiency. In the absence of a duty for landlords to make such disclosures, tenants potentially would make leasing and rental payment decisions without taking into account possible costs associated with lead hazard control or lead-related health risks. Providing tenants with knowledge of lead-based paint hazards encourages more efficient rental agreements and abatement measures.

136 Id.
138 Lead; Proposed Requirements for Disclosure of Information Concerning Lead-Based Paint in Housing, 59 Fed. Reg. at 54,993. Congress only intended to provide for money damages, and not to invalidate completed real estate transactions. Although Title X does not allow a cause of action to invalidate a contract or lease for failure to make required disclosures, common law theories of misrepresentation, fraud, and intentional concealment may affect enforceability.
139 42 U.S.C. § 4852d(d).
140 Lead; Proposed Requirements for Disclosure of Information Concerning Lead-Based Paint in Housing, 59 Fed. Reg. at 54,984–54,985. EPA and HUD interpret Congressional intent as allowing one year between promulgation of the final rule and its effective date. EPA and HUD did not meet the statutory deadline of October 28, 1994 for promulgating the final regulations. Id.
141 Id. at 54,995.
142 EPA and HUD have commented on the market benefits associated with disclosure regulations. See id.
B. Evaluation and Control of Lead-Based Paint Hazards

1. Common Law Duty to Evaluate

As noted above, landlords have no duty to inspect leased property for unknown defects.\(^{143}\) In *Felton v. Spratley*, an injured tenant argued that a landlord had a duty to inspect for lead-based paint hazards.\(^{144}\) The tenant argued that by 1987, the time the lead-based paint poisoning occurred, the hazards of lead-based paint generally were known to the public.\(^{145}\) Therefore, the argument continued, landlords had a reason to know of the hazard.\(^{146}\) The tenants argued that if the landlord had a reason to know in general, then the landlord was under a duty to evaluate specific rental housing to determine whether any lead-based paint hazards were present.\(^{147}\) The court refused to follow the tenants rationale and did not impose a legal duty upon the landlord to inspect.\(^{148}\)

Looking closely at the duty to evaluate, there is a critical distinction between a “should know” standard and a “reason to know” standard. Comment b to section 358 of the Restatement (Second) of Torts explains what constitutes a “reason to know” of a hazard:

> it is not enough that the dangerous condition of the land is one which might be discovered by a reasonable inspection of the premises. The lessor is under no duty to his lessee, or to any other person entering the land, to make such an inspection. . . .\(^{149}\)

Courts have defined reason to know as meaning that the landlord has knowledge that a reasonable person in a similar position “would either infer the existence of the fact in question or would regard its existence as so highly probable that his conduct would be predicated upon the assumption that the fact did exist.”\(^{150}\) As suggested above, such a standard implies that landlords only have a duty to disclose unknown risks that they could have discovered in a cost-effective manner.\(^{151}\) A “should have known” standard, on the other hand, means that


\(^{145}\) Id.

\(^{146}\) Id.

\(^{147}\) Id. at 1363.

\(^{148}\) See id. at 1363–64.

\(^{149}\) Restatement (Second) of Torts § 358 cmt. b (1965).

\(^{150}\) Richwind Joint Venture 4 v. Brunson, 645 A.2d 1147, 1154 (Md. 1994).

\(^{151}\) See supra section III.
the landlord has a broader duty to investigate, which is generally inefficient.\footnote{152}{See \textit{id}.}

2. Common Law Duty to Abate

There are no clear legal standards of care for lead hazard control in private rental housing.\footnote{153}{See \textit{infra} notes 155–75 and accompanying text.} Common law and statutes regarding lead-based paint in private rental housing vary greatly between states and even within states.\footnote{154}{See \textit{id}.} Landlords have been sued under a variety of common law theories, including breach of contract, failure to repair, and breach of express or implied warranties of habitability.\footnote{155}{For cases dealing with a landlord's liability under breach of contract theory, see \textit{Dunson v. Friedlander Realty}, 369 So. 2d 792, 795 (Ala. 1979) (tenant could state a claim for breach of contract where landlord voluntarily agreed to abate lead paint and did so negligently) and \textit{Garcia v. Jiminez}, 539 N.E.2d 1356, 1360 (Ill. App. Ct. 1989) (landlord's unspecific promise to fix up the property did not amount to a contract to abate lead paint).} Most habitability theories actually are based on statutory landlord-tenant law, rather than common law principles.\footnote{156}{See cases cited \textit{infra} section IV.B.3.}

Courts have taken varying positions on whether the common law imposes a duty on landlords to take action to control lead-based paint hazards.\footnote{157}{See \textit{infra} notes 158–75 and accompanying text.} In many states, courts have held that a landlord does not have a duty to repair defects in rented property, unless the landlord specifically agrees to do so.\footnote{158}{\textit{Jiminez}, 539 N.E.2d at 1359. See \textit{id}.} In \textit{Garcia v. Jiminez}, the tenants argued that the landlord had a duty to repair defective lead paint because the landlord agreed in general to make repairs.\footnote{159}{See \textit{id}. at 1360.} The Illinois Appellate Court found that promise was not specific enough to impose a duty upon the landlord to repair defective lead-based paint.\footnote{160}{See \textit{id}. at 1360.}

In other states, courts have held that a landlord can be liable for defective conditions, such as lead-based paint hazards, if the landlord either knew or had reason to know of the condition and had a reasonable opportunity to correct the condition.\footnote{161}{See Richwind Joint Venture 4 v. Brunson, 645 A.2d 1147, 1154–55 (Md. 1994) (explaining Maryland common law); Felton v. Spratley, 640 A.2d 1358, 1361 (Pa. Super. Ct. 1994) (explaining Pennsylvania common law).} The reasonable opportunity qualification implies that landlords presumably will not be held
liable for failure to abate the hazard if such an action was not cost-justified, or "reasonable." This formulation is consistent with our demonstration of the efficiency of a negligence rule with the duty standard set at reasonable abatement.162

In Winston Properties v. Sanders, tenants sued the landlord for their grandchildren's lead poisoning, alleging common law negligence on the part of the landlord for allowing lead-based paint to remain on the rented property after notice.163 The Ohio Court of Appeals held that to be liable under a common law negligence theory, the landlord must have known both of the presence of lead-based paint and the danger posed by the paint.164 Although the tenants did notify the landlord about defective paint, the court found that such notification was not the same as notifying the landlord about the presence of lead-based paint in the property.165

Even in states where a landlord is under no duty to repair a rental unit, landlords are under a duty to keep common areas—areas over which a landlord retains control—in repair and in a reasonably safe condition.166 Under such a duty, landlords would be liable to tenants for injuries resulting from such unsafe conditions.167 Tenants have sued landlords for children's lead poisoning based on the theory of common law negligence for defective lead-based paint in the common areas.168 In Norwood v. Lazurus, two landlords owning two different premises were sued by a tenant who had resided in both.169 The first property contained peeling lead-based paint in a common hallway where the tenant's child played.170 The second property contained flaking lead-based paint on both the front and back porches.171 The first landlord knew that the hallway paint contained lead, but defended on the basis that he did not know and had no reason to expect that the child would play unattended in the common hallway.172 In finding the landlord liable, the Missouri Court of Appeals reasoned that "the exercise of ordinary care where children are concerned

162 See supra section III.B.2.b.
164 See id. at 1282.
165 Id. at 1281.
166 See, e.g., Norwood v. Lazarus, 634 S.W.2d 584, 586–87 (Mo. Ct. App. 1982).
167 See id. at 588.
168 Id. at 585.
169 Id. at 585–86.
170 Id.
171 Norwood, 634 S.W.2d at 586.
172 See id. at 587.
requires more vigilance and caution than might be required with respect to an adult.”\textsuperscript{173} The court found that one reasonably could foresee that the tenant’s child would play in the hall and that “children of tender years have a proclivity to put anything they can get into their hands into their mouths.”\textsuperscript{174} The court also found the second landlord liable because he oversaw the purchase of the paint and therefore must have known of the contents of the paint, and reasonably could expect a child to play on the porch.\textsuperscript{175}

An expanded duty for landlords with regard to common areas is consistent with efficiency to the extent that common areas are like public goods, which tenants have an incentive to abuse.\textsuperscript{176} In particular, with regard to lead paint hazards in common areas, individual tenants will have insufficient incentives to take precaution against risk. Incentives remain insufficient even if tenants are responsible for their own injuries, because any efforts a tenant undertakes will partially benefit other tenants. As a result, the landlord may be in the best position to provide precaution in common areas.

3. Statutory Duty to Abate

Legislation has imposed duties upon landlords that go beyond the common law.\textsuperscript{177} A landlord can be liable for violation of a statutorily imposed duty. This principle is set out in section 17.6 of the Restatement (Second) of Property, Landlord, and Tenant:

\begin{quote}
[a] landlord is subject to liability for physical harm caused to the tenant . . . by a dangerous condition existing before or arising after the tenant has taken possession, if he has failed to exercise reasonable care to repair the condition and the existence of the condition is in violation of: (1) an implied warranty of habitability; or (2) a duty created by statute or administrative regulation.\textsuperscript{178}
\end{quote}

Therefore, if there is a legislative mandate making it illegal to have any defective paint or any lead-based paint on rental property, a landlord may be liable to a tenant for violation of the provision.\textsuperscript{179} In

\begin{flushright}
\textsuperscript{173} Id.
\textsuperscript{174} Id.
\textsuperscript{175} Id. at 588.
\textsuperscript{177} “When a statute provides that under certain circumstances particular acts shall or shall not be done, it may be interpreted as fixing a standard for all members of the community, from which it is negligence to deviate.” WILLIAM L. PROSSER, LAW OF TORTS § 36, 190 (4th ed. 1971).
\textsuperscript{178} RESTATEMENT (SECOND) OF PROPERTY, LANDLORD, AND TENANT § 17.6 (1976).
\textsuperscript{179} See id.
\end{flushright}
most states, courts have not found a landlord liable unless the landlord had actual knowledge or a reason to know of a dangerous condition created by a lead-based paint hazard.\textsuperscript{180} In some states, however, courts have gone so far as to find that violation of a statute, regulation, or ordinance is negligence per se, thereby making proof that the landlord had knowledge of the problem unnecessary.\textsuperscript{181}

The housing codes of many states and municipalities make it illegal to have defective paint in residential property or to apply lead-based paint to surfaces.\textsuperscript{182} For example, the Baltimore, Maryland City Code requires that residential property be kept clean and free of defective paint.\textsuperscript{183} The court in \textit{Richwind Joint Venture 4} stated that this provision imposed a statutory duty to correct defective paint.\textsuperscript{184} In that case, a tenant whose children became lead poisoned due to the condition of the paint sued the landlord for negligence.\textsuperscript{185} The Maryland Court of Appeals held that even for violation of a statutory duty, a landlord must have notice of a defective condition on a property before being held liable.\textsuperscript{186} The landlord's property manager had both particular knowledge of the defective paint in the unit and general knowledge that older homes such as the rented property often contained lead-based paint.\textsuperscript{187} Based on this knowledge, the court found that the landlord had reason to know of the hazard that the defective paint posed to the tenant's children.\textsuperscript{188}

The New Haven, Connecticut Code of General Ordinances requires landlords to maintain rental property free of lead.\textsuperscript{189} That ordinance was applied in \textit{Hardy v. Griffin}, where a tenant's child was severely mentally disabled as a result of lead poisoning.\textsuperscript{190} The Connecticut Superior Court found the landlord strictly liable on the ground that the apartment contained lead-based paint.\textsuperscript{191} The landlord's knowledge of the existence of such paint was not of primary significance to the court.\textsuperscript{192}

\begin{footnotes}
\item[181] See supra notes 90-92 and accompanying text.
\item[182] See infra notes 183-92 and accompanying text.
\item[183] BALTIMORE, MD., CODE art. 13, §§ 702, 703, 706 (1983).
\item[184] Richwind Joint Venture 4 v. Brunson, 645 A.2d 1147, 1151-52 (Md. 1994).
\item[185] \textit{Id.} at 1150-51.
\item[186] \textit{Id.} at 1153.
\item[187] \textit{Id.} at 1154-56.
\item[188] \textit{Id.}
\item[189] NEW HAVEN, CT., CODE OF GENERAL ORDINANCES, § 16-49, et seq.
\item[191] See id. at 51.
\item[192] See id. at 50, 52 (awarding tenant $828,626 plus attorneys fees and costs against a landlord
\end{footnotes}
The landlord-tenant laws of some states also address the presence of lead-based paint. A Connecticut statute deemed residential rental property "uninhabitable" if defective lead paint was present. In *Gore v. People's Savings Bank*, a tenant sued under that former Connecticut law to recover damages for injuries sustained due to poisoning caused by lead-based paint on the rented property. Section 47a-8 of the Connecticut General Statutes stated that the presence of paint that did not conform to federal lead standards, or of defective paint that constituted a health hazard, rendered rental property unfit for human habitation. Therefore, a landlord renting such property violated the law. The issue in *Gore* centered on whether a violation of this statute constituted negligence per se or strict liability. The trial court instructed the jury that in order to find the landlord liable, the landlord had to have had actual or constructive notice of the defective lead paint. On appeal, however, the verdict for the landlord was reversed and the case was remanded for a new trial on the ground that a violation of Section 47a-8 was negligence per se. The Connecticut Appellate Court held that no proof of the landlord's knowledge was necessary and thus, the trial judge's instruction to the jury was reversible error. The Connecticut Supreme Court, in turn, reversed and remanded the case to the Appellate Court for further proceedings, holding that the negligence per se

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for the tenant's son's lead poisoning. In finding the landlord strictly liable for damages due to the presence of defective lead-based paint, the court relied upon the fact that the landlord violated both the local code of general ordinances and the Connecticut Landlord-Tenant Act. See id. at 50. But see infra notes 201–05 and accompanying text (discussing different outcome of *Rice v. Reid*, No. 3–91–34, 1992 Ohio Ct. App. LEXIS 2145, at *6 (Ohio Ct. App. Apr. 28, 1992)).

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194 See, e.g., CONN. GEN. STAT. § 47a–8 (repealed 1994). This law also provided that tenants were not obligated to pay landlords rent for the time there was defective lead paint present, regardless of whether or not there were children potentially at risk residing in the dwelling. See id.
196 CONN. GEN. STAT. § 47a–8 (repealed 1994).
197 Id.
198 Gore, 1995 Conn. LEXIS 322, at *17.
199 Gore, 35 Conn. App. at 128 n.4.
200 Id. at 136.
201 Id. at 137; see also Torres v. Melody, No. CV–91–009–87–65, 1992 Conn. Super. Ct. LEXIS 361, at *8 (Conn. Super. Ct. Feb. 18, 1992), (holding a landlord strictly liable for a tenant's child's lead paint poisoning in violation of the Connecticut Landlord-Tenant Act). The court in *Torres* stated, "[i]t is a well-established principle that the violation of a statute designed for the protection of the public is in itself negligence irrespective of whether the conduct which consti-
standard—unlike strict liability—allowed for valid excuses such as lack of notice.\textsuperscript{202}

In \textit{Rice v. Reid}, the Ohio Court of Appeals held that a landlord could not be held liable for violation of a statutory provision requiring landlords to keep rented property in a “fit and habitable condition” unless the landlord had notice of a defective condition.\textsuperscript{203} In \textit{Rice}, the plaintiff tenants alleged that their two minor children suffered lead poisoning after ingesting lead-based paint chips from inside their apartment.\textsuperscript{204} To prove liability, the court required the plaintiff to show “that the landlord received notice of the defective condition of the rental premises, that the landlord knew of the defect, or that the tenant had made reasonable, but unsuccessful, attempts to notify the landlord.”\textsuperscript{205} Although the landlord had notice of peeling and cracking paint, he had no knowledge that the paint contained lead.\textsuperscript{206} The court found that the tenants’ statements regarding the peeling paint did not rise to the level of “notification of the presence of lead-based paint in the premises.”\textsuperscript{207}

In some states, the violation of a statutorily implied warranty of habitability has barred the collection of rent even if the landlord was unaware of the problem at the time of nonpayment.\textsuperscript{208} In \textit{Housing Authority of the Town of East Hartford v. Oleson}, a landlord commenced an eviction action against tenants for nonpayment of rent.\textsuperscript{209} In their answer, the tenants alleged that “the presence of lead-based paint obviated their obligation to pay rent.”\textsuperscript{210} The Connecticut Appellate Court concluded that, under a state statute, the mere presence

\textsuperscript{202} Gore, 1995 Conn. LEXIS 322, at *44.
\textsuperscript{204} Id. at *2.
\textsuperscript{205} Id. at *3.
\textsuperscript{206} Id. at *4.
\textsuperscript{207} Id. at *5 (quoting Winston Properties v. Sanders, 57 Ohio App. 3d 28, 29 (Ohio Ct. App. 1989)).
\textsuperscript{209} Id. at 921.
\textsuperscript{210} Id.
of lead-based paint rendered the property uninhabitable and the tenant therefore was not obligated to pay rent. The court required no showing that the landlord had knowledge of the lead-based paint, that the lead-based paint presented a health hazard, or even that there were children residing on the property.

Many states have recently passed more pro-active lead legislation that requires disclosure, inspection, or abatement in certain circumstances. Connecticut requires the abatement of defective lead-based paint on all interior and exterior surfaces of residences in which children under the age of six live, and also abatement of certain intact surfaces if a child has an elevated blood lead level. In Massachusetts, property owners are required to abate any lead-based paint hazards if a child under the age of six resides on the property.

There are few reported state cases involving these relatively recent state lead-based paint laws. Apparently, a landlord who violates the laws will be civilly liable to a tenant for damages related to lead-based paint poisoning. Whether landlords will be strictly liable or whether tenants will have to prove that a landlord had knowledge of the lead paint hazard in order to prevail will probably depend upon the wording of the statute. Under the Massachusetts law, which requires owners of residential property to abate lead hazards whenever a child under the age of six resides on the property, landlords have been

211 Id. at 922.
212 See id. at 922–23.
215 See MASS. GEN. LAWS. ANN. ch. 111, § 197 (West 1995).
216 See e.g., id. § 197–98.
found strictly liable for injuries to a tenant's child.217 In Bencosme v. Kokoras, the Massachusetts Supreme Judicial Court did not require a showing that the landlord either knew about the presence of lead-based paint on the property, or was negligent in not abating the lead, before finding liability.218

Landlords that comply with state statutes are not necessarily immune from liability under common law theories.219 In Tillman v. Johnson, for example, a landlord was sued for a tenant's child's lead-based paint poisoning.220 A Louisiana statute in effect at the time of the poisoning required a landlord receiving notice of the existence of the lead-based paint to remove the lead-based paint if a child then resided in the rented property.221 The Louisiana Court of Appeals affirmed the trial court's grant of summary judgment for the defendant landlord on the basis that the landlord had not violated this provision because he received no notice of the presence of lead paint.222 The Louisiana Supreme Court reversed the entry of summary judgment and remanded the case back to the trial court because there was a genuine dispute as to whether the landlord violated a codified common law-type duty.223

Besides civil damages for failure to comply with a state statute, landlords also may be subject to criminal charges.224 In Connecticut, a landlord of a two family house was arrested for failing to post warnings and submit an abatement plan as required by law.225

At least one court has also enforced lead paint statutes against a landlord, even though the landlord previously was issued a certificate of approval for rental.226 In Campbell, Director of Health of Danbury v. Groves, a local director of health ordered abatement of lead paint

217 Id.
219 See, e.g., Tillman v. Johnson, 612 So. 2d 70, 70 (La. 1993); see also infra note 223.
220 Tillman, 612 So. 2d at 70.
221 LA. REV. STAT. ANN. § 40:1299.26 (West 1972). Although this law was amended in 1988 and again in 1995, the amendments would not affect the holding of Tillman.
223 Tillman, 612 So. 2d at 70. The Louisiana statute, LA. CIV. CODE ANN. art. 2317 (West 1979), allows for either a negligence or a strict liability cause of action against the owner of a thing where "(1) the thing which caused the damage was in the custody of the defendant; (2) the thing contained a 'defect,' that is, it created an unreasonable risk of harm to the plaintiff; and (3) the defective condition of the thing caused the plaintiff's injuries."
225 Id.
hazards pursuant to the Connecticut lead paint law. 227 The landlord argued waiver and estoppel defenses. 228 The landlord contended that because lead was present when the municipality issued the certificate of occupancy, the municipality had waived the right to continue to regulate the lead paint content on the property. The Connecticut Superior Court found that statutorily required abatement cannot be waived by any local official’s issuance of a certificate authorizing occupancy. 229

There are no federal laws that require landlords to inspect for or abate lead-based paint hazards in private housing, 230 though Title X does require landlords to undertake certain lead-based paint hazard evaluation and control activities in federally owned and assisted housing. 231 Nevertheless, the trend in state statutes seems to be toward imposing duties on landlords that exceed the common law duties of disclosure and reasonable abatement. 232 Our theory suggests that this trend will tend to increase the costs associated with lead paint risk.

4. Task Force Recommendations

Title X established a Task Force on Lead-Based Paint Hazard Reduction and Financing (Task Force) to address issues related to lead-based paint hazards in private housing. 233 The Task Force issued a report on its findings and suggestions. 234 The Task Force recognized that property owners and occupants are not fully informed of lead-based paint problems, and that education and disclosure are important parts of combatting lead-based paint poisoning. 235

The Task Force has set forth standards of care for owners of rental properties. 236 Those standards would require all owners of pre-1978 rental units that are not lead-free to perform certain maintenance

227 Id. at *3.
228 Id. at *5-6.
229 Id. at *9.
230 In contrast, there are numerous regulatory requirements for federally owned and assisted housing. See, e.g., Title X, 42 U.S.C. §§ 4851-56; Lead-Based Paint Poisoning Prevention Act of 1971, 42 U.S.C. §§ 4822-41 (1988). HUD is now undertaking a comprehensive revision of its lead-based paint regulations regarding federal housing pursuant to Title X.
232 See supra notes 193-229 and accompanying text.
234 See generally TASK FORCE, supra note 10, at 2-17.
235 Id. at 51.
236 Id. at ch. 3.
practices,\textsuperscript{237} to control identified lead-based paint hazards, and to take appropriate control measures if a child occupying the property has an elevated blood level.\textsuperscript{238} Property owners would have the option of taking either hazard evaluation or control as a first step.\textsuperscript{239} Any identified hazards would have to be addressed immediately in units with children under the age of six or in units in which pregnant women reside.\textsuperscript{240} In other units, control activity can be taken upon unit turnover.\textsuperscript{241} Housing units built before 1950 would be classified as "higher priority."\textsuperscript{242} In addition to the above requirements, property owners of "higher priority" units would need to implement a set of "standard treatments,"\textsuperscript{243} or obtain a lead hazard evaluation and control all lead hazards.\textsuperscript{244} The Task Force recommendations are not law; instead they are recommendations for incorporation in state and local law.\textsuperscript{245} The Task Force also encourages using the standards as benchmarks for providing liability insurance and for limiting the legal liability of owners that comply.\textsuperscript{246} By following these standards, property owners could show that they have taken action.\textsuperscript{247} The Task Force recognizes that there could be market incentives for property owners to follow standards rather than legal incentives, especially through the availability of financing, property liability insurance, and liability limitation.\textsuperscript{248} The Task Force does recommend, however, that in order to ensure com-

\textsuperscript{237} According to the Lead-Based Paint Hazard Reduction and Financing Task Force, "Essential Maintenance Practices," include the following practices: (1) using safe renovation, remodeling and repair practices; (2) performing visual examinations for deteriorated paint; (3) promptly and safely repairing deteriorated paint and the cause of the deterioration; (4) providing generic LBP hazard information to tenants per Title X; (5) posting written notices to tenants to report deteriorating paint and informing them whom to contact; (6) training maintenance staff about lead-based paint hazards, unsafe practices, and occupant protection. Id. at Exhibit 3–3.

\textsuperscript{238} See id. at ch. 3.

\textsuperscript{239} Id.

\textsuperscript{240} Id.

\textsuperscript{241} Id.

\textsuperscript{242} Id.

\textsuperscript{243} The Task Force identified the following things as "Standard Treatments:" (1) safely repairing deteriorated paint; (2) providing smooth and cleanable horizontal surfaces; (3) correcting conditions in which painted surfaces are rubbing, binding, or being crushed that can produce lead dust (unless the paint is found not to be LBP); (4) covering or restricting access to bare residential soil (unless it is found not to be lead-contaminated); (5) specialized cleaning; and (6) performing sufficient dust tests to assure safety. Id. at Exhibit 3–6.

\textsuperscript{244} Task Force, supra note 10, at 76.

\textsuperscript{245} Id. at 88.

\textsuperscript{246} Id. at ch. 5, ch. 6.

\textsuperscript{247} Id.

\textsuperscript{248} Id.
pliance, these standards be incorporated into the law rather than relying on a pure market approach.\textsuperscript{249}

To identify lead-safe housing for tenants seeking such units, the Task Force recommends creating a registry of rental units that meet the standards.\textsuperscript{250}

V. Conclusion

The risks from exposure to lead-based paint increasingly are being recognized as important in terms of both public health and housing policy. Although the use of lead in residential house paint was banned in 1978, a significant portion of the housing stock, especially in inner cities, remains contaminated, and therefore poses a continuing risk. Because the cost of removing all lead paint is formidable, an economic analysis of cost-minimizing approaches to risk reduction is an important component of a sound lead paint policy. To that end, we have offered an economic analysis of the cost of lead paint risk, focusing primarily on the rental housing market.

The major conclusions from the theoretical analysis are as follows. First, in cases in which both landlords and tenants know of the presence of risk in a building, the following liability rules promote an efficient, cost minimizing, outcome: (i) a landlord’s duty to undertake reasonable, or cost-justified, abatement or removal of the hazard, (ii) a tenant’s duty to undertake reasonable precaution, and (iii) no liability for landlords. In contrast, a rule that imposes strict liability on the landlord—a duty to abate—does not lead to the efficient outcome. Under such a rule, tenants have no incentive to undertake efficient precaution against risk because tenants know they will be compensated fully for their losses. As a result of this moral hazard problem, the expected costs of contamination are not minimized. A landlord, who is liable to tenants for not abating risks, will choose abatement too often—that is, the landlord will sometimes choose abatement when the socially optimal result would be for tenants to undertake interim controls.

Second, when landlords have better information about the risk than tenants, landlords should have a duty to disclose known risks. If landlords do not have such a duty, landlords would have an incentive to withhold information about risks in order to represent the building

\textsuperscript{249} Task Force, \textit{supra} note 10, at 93.

\textsuperscript{250} See \textit{id.} at 131.
as safe, thereby allowing landlords to charge a higher rent. Finally, when neither landlords nor tenants have information about risk, landlords should not have a strict duty to inspect for the risk, because such a duty might lead to excessive resources devoted to inspection, again due to the moral hazard problem. In the absence of such a duty, landlords and tenants would make the socially correct decision about when to test. A rule that imposed on landlords a duty to undertake only reasonable inspections achieves similarly efficient results.

These results suggest that, in order to promote efficiency, the legal framework for lead-based paint hazard control should be structured to create the proper incentives for both landlords and tenants to invest efficiently in risk-reducing activities. The problem with strict liability rules is that they generally eliminate that incentive for the party not held liable—the tenant in most cases—to act efficiently. A review of lead paint laws suggests that the common law is largely consistent with this logic in that courts generally have not held landlords strictly liable. At most, courts have required that landlords undertake reasonable efforts to abate the risk, which does not eliminate incentives for tenants to act efficiently. In contrast, recent statutory efforts to control lead paint risks, both at the federal and state levels, are moving in the direction of greater duties for landlords. As suggested, this trend will reduce incentives for tenants to invest efficiently in risk-reducing activities and will thereby increase the overall cost associated with lead paint contamination. Of course, shifting costs to landlords may serve a purpose other than economic efficiency. In that case, the analysis in this paper can be used to predict the likely consequences in terms of landlord and tenant behavior, as well as the additional costs, of pursuing that objective.