

Designing and Administering Lead Hazard Control Programs: Lessons Learned Update

*Evaluating Lessons Learned from HUD
Lead Hazard Control Grantees*

Final Report

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Introduction

Former U.S. Senator Tip O’Neill once famously said, “All politics is local.” Many practitioners have said that “All lead is local” and indeed this seems to hold true. The U.S. Department of Housing and Urban Development (HUD) has funded Lead-Based Paint Hazard Control (LHC) grant programs across the country for over 10 years. During that time, it has become clear that there is “no one correct way to administer a program...much depends on local conditions and individual program goals” (The National Center for Healthy Housing, 1997). Despite the local nature of lead hazard control, there are universal lessons to be learned. Certain program activities present obstacles for grantees across the board. Different strategies may work for different grantees, but some policies and approaches are more widely applicable. Lead hazard control grantees (grantees) have made great strides and learned valuable lessons about how to administer programs. Their experiences have been shared through evaluation studies, reports, and lead grantee conferences to assist existing and future grantees. In 1997, the National Center for Healthy Housing (NCHH) published “Designing and Administering Lead Hazard Control Programs: Lessons Learned To Date” to capture what HUD grantees had learned to date in establishing and administering their programs. The report was intended to be a “work in progress” (NCHH, 1997). The purpose of this report is to build on the existing knowledge base and share new information to support lead hazard control programs.

Eleven lead hazard control grantees were interviewed about screening; eligibility and intake; financing; relocation; contractor availability, retention, and cost; production; and outreach and education. A review of the available literature, as well as lessons learned through NCHH’s more than ten years of direct work with lead grantees, identified key topics for interviews. This literature review included all published evaluations of grantee performance since the beginning of the Lead Hazard Control Grant Program. Four evaluation studies, one journal article, and the HUD Office of Healthy Homes and Lead Hazard Control’s (OHHLHC) website served as key reference documents. Although there is some overlap among the grantees participating in the four studies noted above and this study, collectively grantees from all across the country are represented.

This report includes issues that affect lead hazard control programs with a primary prevention focus. Recent HUD and U.S. Centers for Disease Control and Prevention (CDC) guidance stress the need to take a primary prevention focus to lead hazard control. Treating homes for lead hazards before residents’ children have elevated blood lead levels facilitates national efforts to meet the Healthy People goal of eliminating childhood lead poisoning by 2010. Involvement of community-based and faith-based organizations in outreach

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and education is integral to this goal. All grantees interviewed have extensive partnerships with local government and the nonprofit sector.

The project team extends its thanks to all eleven grantees for sharing their time and expertise. Their experiences have informed this report and will be of great technical assistance to existing and future lead hazard control grantees.

Methods and Participating Grantees

Howard University Center for Urban Progress (HUCUP) contracted with NCHH to update the 1997 NCHH “Designing and Administering Lead Hazard Control Programs: Lessons Learned To Date” report. NCHH identified interested, experienced grantees for interviews on topics essential to lead hazard control programming. This report is part of a larger HUD funded Lead Technical Study being undertaken by Howard University, which is using a community-based participatory research approach to evaluate program components of the Washington, D.C. Lead Poisoning Screening and Education Program. This report supports HUCUP’s research comparing and evaluating the District of Columbia’s lead hazard control program.

HUCUP and its Lead Technical Study Advisory Board reviewed the interviewee selection strategy before its implementation. Once approved, NCHH identified a pool of twenty-nine successful grantees. To further narrow the list, NCHH used Census 2000 data to review population and socio-economic data to ensure that the final interviewee list was reasonably representative of the varied communities across the country. To support the mission of the larger HUCUP study, the team also included in its list grantees that were comparable in size and/or structure to the Washington D.C. lead hazard control program. The project team reviewed the revised list of fifteen grantees, further narrowed the list to eleven, and submitted it to HUCUP for approval. The total number of grantees to be interviewed was based on project resources, project timeline, the federal Paperwork Reduction Act requirements, and previous grantee studies.

NCHH e-mailed invitation letters and then followed up with telephone calls to the eleven grantees identified to ascertain those who wished to participate in the project. One grantee could not be interviewed within the project timeframe, so the team selected another grantee from the previous list of fifteen. Two grantees were interviewed to pilot the interview instrument, and nine were interviewed once it was finalized.

In alphabetical order, the following eleven lead hazard control grantees were interviewed as part of this project:

- *Alameda County, CA* – Mark Allen, Project Director; Dale Hagen, Project Manager; and Julie Twichell, Housing Partnerships Liaison and Community Education Manager

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- *Baltimore, MD* –Amy Spanier, Program Director
- *Cleveland, OH* – Jonathan Brandt, Environmental Hazard Control Project Manager
- *Cuyahoga County, OH* – John Sobolewski, Healthy Homes and Lead Poisoning Prevention Program Manager
- *Kansas City, MO* - Terry Bray, former Program Manager; Marty Galutia, Program Manager; Paula Macaitis, Lead Inspector; Carol Pollard, Outreach Coordinator; Amy Roberts, Case Management Nurse; Mike Wright, Lead Inspector and Construction Inspector
- *Los Angeles, CA* – Julie Chavez, Policy Analyst, Housing Division; and Sergio Tejadilla, former Lead Program Manager, Housing Division
- *Milwaukee, WI* – Richard Gaeta, Lead Hazard Prevention Manager; Amy Murphy, Division Manager, Home Environmental Health Division; and Sara Schubert, Lead Program Outreach and Education Coordinator
- *New York City, NY* – Andrew Faciano, NYC Department of Health and Mental Hygiene; and Tom O’Hagan, NYC Department of Housing Preservation and Development
- *Philadelphia, PA* – Richard Tobin, Program Manager, Environmental Health
- *San Diego, CA* – Frank Ballow, Program Manager, Housing Commission; Alan Johanns, Program Manager, Environmental Health Division; and Lyle Knudsen, Senior Program Analyst, Housing Commission.
- *Syracuse, NY* – Betsy Mokrzycki, Lead Abatement Program Manager

With the exception of Philadelphia, all of the grantees listed above have participated in previous programmatic evaluations, which the project team used to further inform this update. Alameda County, Baltimore, Cleveland, Los Angeles, San Diego, Milwaukee and New York City grantees participated directly in the first *Lessons Learned* report. (See Appendix A for additional descriptions of the grantees interviewed.)

The project team reviewed the *Lessons Learned* report to assess which program elements continue to present challenges to grantees. Previously, NCHH had studied the following program elements: intake; insurance; inspection/risk assessment/clearance; lead hazard control strategies; historic preservation; specification development; financing; relocation; construction;

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education and information; and program evaluation. After reviewing current literature and based on NCHH's experience, the project team determined that five of the original eleven topic areas remained salient but issues such as insurance, risk assessment/clearance, and basic strategies for lead hazard control had been addressed through previous publications, HUD OHHLHC technical guidance documents, and HUD grantee conferences. Based on HUCUP survey needs and emerging grantee issues, the team also expanded or added new topic areas: screening, working with faith-based organizations, and production. The area of production came in for increased scrutiny because timely lead hazard control in a large number of units continues to be an important and challenging measure for HUD lead grantees. Thus, the final eight program areas for discussion are blood lead screening; eligibility and intake; financing; relocation; contractor availability, retention, and cost; production; outreach and education; and work with faith based organizations.

A topic-specific interview tool was designed to identify and record unique program decisions and applications specific to the area of interest. The interview tool included a series of prompts to collect information on important linkages and other matters directly related to the topic. NCHH has previously used this interview format successfully in a number of other qualitative studies. The interview tool included thirteen questions written by HUCUP staff in the areas of blood lead screening and lead hazard control, outreach and education, and work with faith based organizations. (See Appendix B for a copy of the interview guide.)

The project team scheduled telephone interviews with grantees. Two project team members who are former lead hazard control grantees, Peggy Hegarty-Steck and Sharon Pendleton, conducted the interviews along with HUCUP staff. Grantees were given the opportunity to review and comment on the NCHH summary of each interview. The project team used interview responses, as well as referenced studies and reports, to prepare a first draft of the "Lessons Learned Update." Ms. Hegarty-Steck and Ms. Pendleton also contributed information to the report based on their many years of lead hazard control program experience. Both have served as HUD trainers to lead hazard control grantees regarding program start-up and operational issues.

Program Elements and Lessons Learned

a. Eligibility and Intake

Original Findings

A critical step in setting up a lead hazard control program is the selection of program eligibility criteria. Careful consideration of these criteria facilitates the initial stages of intake and prevents a variety of obstacles in the process. Although the HUD NOFA dictates certain minimal criteria for all programs (such as income requirements of occupants and age of housing to be treated), grantees control other optional requirements of the program. These decisions

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are usually based on specific community needs and program goals such as number of units to be treated, current childhood lead poisoning rates, age and condition of housing stock, likelihood of participation by rental property owners, and ability of property owners to repay a loan (NCHH, 1997).

Lessons Learned outlined several options for eligibility criteria:

- Target children with elevated blood lead levels (EBL) over a certain threshold level.
- Target areas (such as neighborhoods, census tracts) with known high lead poisoning rates.
- Target areas with older housing (e.g. pre-1950 or 1960), housing that is in poor condition, and/or areas with high soil lead levels.
- Target low-income areas.
- Add lead funds to housing that is undergoing other types of publicly funded rehabilitation (through CDBG, HOME, weatherization programs).
- Combine any of the above strategies.

Grantees implemented some of these options when developing program eligibility criteria. Grantees that used both EBL and age related criteria found that obstacles to production included lack of new EBL cases, difficulties in enrollment, resistance from property owners, high treatment costs, and high rates of family mobility. *Lesson Learned* suggested that programs carefully assess their screening rates before using EBL as an eligibility criterion: "...targeting EBL children is a worthwhile short-term strategy to undertake when there is a backlog of eligible cases, but hopefully a program can move to primary prevention – reducing lead hazards in housing before children get poisoned..." (Lessons Learned, 1997, p.7).

Literature Update

An unpublished retrospective report to HUD (Battelle and NCHH, 2004) stated that targeting deteriorated rental housing in communities with a high incidence of childhood lead exposure provides a more effective pathway for enrollment and treatment of lead-hazardous units than using the EBL status and age of children.

Programs reported that a less-restrictive eligibility model targeted at lead-hazardous housing in low-income neighborhoods provided opportunity to engage property owners on a non-punitive basis, and tended to attract rental unit owners that frequently house families with young children. "Self-motivated enrollment provided for greater opportunity to find and engage owners of rental property compared with the more stressful approach of identifying children with elevated blood lead levels" (Battelle and NCHH, 2004, p. 26). This primary prevention approach requires that the program communicate directly with the targeted property owners, and not rely on a list of EBL children for the intake and enrollment process.

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Additionally, the report found that the actual intake process itself could also serve as a barrier unless adequate staff support was available. Owners and tenants frequently experienced difficulty completing the necessary paperwork due to language, literacy, or other issues. Program planning to address these potential barriers was essential to successful intake and enrollment.

Interview Findings

Interviews with grantees reinforced the important relationship between carefully selected eligibility criteria and the ease of intake and program enrollment. Successful programs strike a balance in terms of eligibility criteria. Three specifically included a unit with an EBL child as an eligibility criterion. Grantees noted that the biggest drawback to using an EBL-based strategy was that it failed to reach properties before lead exposures occurred and it required good screening penetration. Furthermore, it failed to engage rental property owners, where the vast majority of children with EBLs reside. Balancing the need to treat units with children with EBLs and the need to prevent children from lead exposure is a critical decision point for grantees.

During the interview process, participants underscored a vital link between participation by owners of rental units and efforts to reduce the incidence of childhood lead poisoning. Some respondents expressed a clear linkage between the participation of these owners and code compliance within the jurisdiction. For several grantees, enforcement was integral to program enrollment.

“The carrot and stick strategy with a well-established policy for enforcement has been key to this program and modest incentives of funding have been adequate for successful implementation of primary prevention projects (in large numbers).”

Presence of a child less than six years old in an occupied unit is frequently used as an eligibility criterion and may be allowed if that child spends a “significant amount of time” but is not a full time resident (e.g., a grandparent providing child care). Some grantees also include homes of expectant mothers. Grantees who used these less restrictive criteria believe this has generally encouraged enrollment and participation.

There was consensus among interviewees that housing in good structural condition was a necessary criterion for program enrollment. One interviewee noted, “We want to make sure the housing is structurally sound. We want to make sure that any lead hazard control work we do will stay in place...” Although structural integrity of the unit is a common criterion, a variety of standards are used to assess the housing stock. Some grantees use the federal Housing Quality Standard (HQS), others use local housing standards, and still others have developed a modified standard for program purposes. The choice

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of standards was complicated when other state, local, or federal funds were used as matches to the lead hazard control funding, since each funding stream had its own requirements for assessing structural conditions. The key is to determine what reasonable standard ensures that the building is sound enough to warrant an investment of lead hazard control resources. CDC's *Preventing Lead Exposure in Young Children: A Housing-Based Approach to Primary Prevention of lead Poisoning* (2004, p. 35) recommends that localities adopt a "...lead-safe standard of care for housing that is consistent with research and evaluation findings."

Three of the grantees also use tax payment status as an eligibility criterion. If an owner is behind on property taxes or water and sewer payments, then the program may reject the application. Communities do not want to lend lead hazard control funds when other funds are already owed to the community. One interviewee requires that the owner be current on all taxes – city, county, and state. One grantee accepted applicants with a deferred payment program for back taxes. That same grantee observed that properties owned by investors were less likely to be in compliance with taxes, and required documentation of compliance posed a barrier to enrollment.

In addition to geographic targeting within a high-risk community (based on factors such as household income and age of housing), some programs further limited eligibility to buildings of a specific size (i.e., more than four units). This selective targeting provides successful momentum if the rental units are subject to code inspection, licensing, and enforcement. Because rental units may have frequent turnover, some grantees gave high priority to vacant units to return lead-safe units to the rental market as quickly as possible. By avoiding relocation and tenant paperwork, these units can be completed quickly. Some grantees required that property owners commit to certain rent restrictions, such as requiring that owners must rent to a family with a child less than six years of age after lead reduction was completed. In general, rental units in low-income neighborhoods typically have relatively high turnover rates, and any unit with one or more bedrooms will likely be occupied by such a family in the foreseeable future – thus providing lead-safe housing for a child at risk.

In some instances, interviewees echo earlier observations that paperwork still can serve as a barrier to enrollment. Required documentation can be difficult for property owner applicants to access. Multiple owners on a title can create problems with ownership verification if some of those owners are unavailable. Programs also reported trouble getting tenant cooperation with income verification documentation. Some tenants cannot provide the necessary papers, such as pay stubs or tax filings, or may be concerned that the owner will gain access to their personal information. Tenants who do not want to divulge their financial information can become a barrier to enrollment for the owner. One grantee observed that poor landlord-tenant relations can intensify renters' reluctance to cooperate with these and other program requirements.

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Several grantees mentioned that they conducted joint meetings with owners and renters to facilitate communication.

It is crucial that programs design a means to document income requirements without becoming overly intrusive in the process. These intake and eligibility criteria are within the parameters of the grantee's decisions and should be thoughtfully and carefully outlined in the initial program plan.

Best Practice – Cuyahoga County

The Cuyahoga County program has staff that goes to resident homes to help people fill out applications and address any paperwork problems. There is a lack of trust among residents when asked to provide sensitive paperwork such as tax forms and pay stubs. The program is also considering using portable scanners so that they can scan these sensitive documents on-site at the property and leave the originals with residents.

Even with streamlined paperwork, some grantees noted that hands-on assistance and routine follow up are often needed to complete applications in a timely and accurate manner. Program staff members acting as a liaison between owners and tenants help to ensure that paperwork gets done in a timely fashion and that all parties fully understand program services.

“We go down to their property and we’ve had a great response because it saves them a trip downtown... We transact so much (business) out in the field anyway, an inspector can stop by and pick up materials or give out materials. Alternatively, we can drop off papers or pick up papers through the community organizations. We’re very willing to be out there with them. We make it very user friendly.”

i. Blood Lead Screening

Strategies and policies for blood lead screening were not specifically addressed in *Lessons Learned*. Screening is not typically the responsibility of a lead hazard control grantee unless the grantee is also the local Childhood Lead Poisoning Prevention Program (CLPPP). To support the HUCUP Lead Technical Study, NCHH included several questions about screening in its interview tool. It is important to note that HUD grantees are required to have documentation of blood lead tests for any children younger than six years old prior to beginning lead hazard control work. Tests must have been taken within the previous six months. It is preferable for grantees to coordinate their efforts with whatever agency has screening responsibilities. All the grantees gave examples of ways they interfaced with agencies that do screening to get referrals of children with elevated blood lead levels whose homes need lead hazard control.

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Four of the grantees were health departments with responsibility for lead screening as well as lead hazard control. The testing sequence among these grantees was very similar. Children were screened based on the U.S. Centers for Disease Control and Prevention (CDC) and local guidelines. Typically, private physicians and clinics provided blood lead tests. Children with elevated blood lead levels were identified and referred to the health department. Based on the child's lead level, certain activities took place. Most interviewees provided a letter and literature for children at 10-14 µg/dL. One grantee provided a home visit from an outreach worker who was supervised by a nurse. When children tested at 15 µg/dL or above, families received a case management home visit and a lead-based paint hazard risk assessment. Based on the results of the risk assessment, the grantee issued a violation notice to the landlord to correct the lead hazards. Landlords were given very specific timeframes within which they had to comply or risk court action. One grantee noted prioritizing cases of children 25 µg/dL and above.

Other grantees were not health departments, but reported working closely with their local CLPPPs to support increased screening. All the grantees noted that a good working referral relationship with organizations that did screening, whether health departments or community-based nonprofits, was important to their programs. One grantee noted working with its local managed care plan and providers to promote screening. Two grantees offered training to providers on how to do in-office capillary testing. Another grantee provided capillary tests at health fairs and was in the process of planning for screening at church fairs as well.

Grantees described innovative efforts to tie lead hazard control to enforcement of a local lead ordinances that pertain to EBL children. Several had agreements with local code enforcement agencies to ensure strong enforcement of paint code deficiencies. One city had all rental and owner-occupied units with EBL children automatically referred to a "Lead Court". If the properties were not remediated within the ordered time frame, the grantee would obtain an order from the Court to do the work. Another linked enforcement in one unit to primary prevention in others.

Best Practice – Milwaukee

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Milwaukee does not offer assistance to rental property owners if a child with an EBL has been identified. The owners must remediate that unit with their own funds. However the grantee will offer assistance to the owners to proactively treat their other rental units. This provides an incentive to owners to voluntarily participate in lead hazard control before exposure occurs. The interviewee promoted the idea that participation actually reduces liability for property owners, as it demonstrates compliance and efforts to reach lead-safe standards in rental properties. The grantee reports that by keeping remediation costs low, production is high and rental owners are attracted to the program by word-of-mouth.

Lessons Learned

- Grantees need to assess the local housing market and screening rates before determining which criterion to include.
- Programs should establish less restrictive, rather than more restrictive, eligibility criteria with an emphasis on primary prevention.
- Programs should link financing and enforcement actions. Including “carrots” and “sticks” – good financing and enforcement actions is necessary in order to support enrollment.
- Grantees should streamline the paperwork process and provide hands-on assistance to tenants and owners.
- Programs should partner with their local CLPPP to support screening efforts and facilitate the referral of EBL cases to the program.
- Grantees should draw up a memorandum of understanding with their local code enforcement agency to enforce paint code deficiencies swiftly and rigorously.

b. Financing

Original Findings

According to *Lessons Learned*, programs had a good deal of flexibility in how they structured the lead hazard control funds because HUD allowed for both grants and loans. The report outlined several options for financing:

- Make lead hazard control funds available as outright grants.
- Make lead hazard control funds available as deferred or reduced interest, zero payment loans, possibly disappearing after a period of years or forgiven at sale, either requiring a lien, or not requiring a lien.
- Streamline loan administration.
- Combine lead hazard control funds with other types of financing, or use regular rehabilitation financing sources alone for lead hazard control (NCHH, 1997).

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The financing decisions varied among programs. Some programs offered grants with capped amounts and then supplemented with additional deferred forgivable loans. Other programs offered deferred forgivable loans and then supplemented with no-interest deferred payment loans. Still others provided zero-interest deferred, forgivable loans. Loans seemed to work in states with lead hazard control requirements (NCHH, 1997). Local ordinances and regulations provide a legal incentive for owners to access lead hazard control financing. The administering agency's previous experience with a variety of financing methods also influenced financing decisions. Unless the lead hazard control program was established outside of a housing department (such as a health department), programs often used existing financing models.

The report noted, "homeowners, large investor owners, and owner occupants who might rent a small number of units in their building all have different attitudes toward and abilities to pay for lead hazard control" (NCHH, 1997, p.20). However, among all these owner types, there was a common theme of little interest in or perceived need for lead hazard control work. *Lessons Learned* found that owners were generally unwilling to place a lien on their properties because they did not view lead hazard control as something that contributed to their property values. For example, some programs began by offering low interest loans and were forced to change over to grants because of low program enrollment. They found that owners were not willing to participate when they offered loans.

Once a program determined the type of financing that would be used, it needed to reduce paperwork requirements to speed up the process. "Especially if children with elevated blood lead levels are involved, time can be of the essence" (NCHH, 1997, p.21).

Another financing recommendation was to combine lead hazard control with rehabilitation work. In 1997, many programs combined lead hazard control funds with other types of public rehabilitation financing, such as HOME or Community Development Block Grant (CDBG). There were both benefits and drawbacks to combining lead funds with ongoing rehabilitation. One benefit was the ability to ensure that a jurisdiction's rehabilitation programs were following lead-safe practices. A second benefit was greater cost efficiency when lead hazards were addressed while doing other rehabilitation. In addition, these programs were generally targeted to the most deteriorated housing, and a pipeline of projects already existed into which lead programs could tap. The major drawback to combining lead hazard control with rehabilitation was time delays at the beginning of the work. "This is because predevelopment time for many rehabilitation programs, especially those undertaking moderate to gut rehabilitation, can range from months to years. The more complicated the financing, the longer the predevelopment time. And often, the more substantial the scope of work, the more expensive the job is, and the longer the predevelopment time (NCHH, 1997, p.8). Some programs experienced significant delays, sometimes of a year or more.

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Literature Update

More recent studies confirmed that financing was a key component to program success. Without an attractive financing package, programs with a primary prevention focus found it difficult to recruit owners. Many grantees reported that they started with traditional financing strategies from other repair and rehabilitation programs such as a mix of loan instruments, with either repayable or forgivable loans with a lien attachment on the title. These options did not appeal to many owners for a range of reasons, such as the lack of value in the housing stock, the unacceptable nature of liens, or the limited scope of the lead hazard control work in relation to the loan terms. Where traditional repair and rehabilitation program financing has not worked for lead hazard control programs, grantees have had to be more creative about how to package their financing (Battelle and NCHH, 2004).

Under typical lead hazard control NOFAs, HUD required that units remained affordable for three years after lead hazard control work was done. Some programs in stronger housing markets added affordable housing covenants to their deferred loans to ensure that the units stayed affordable for even more than three years following lead hazard controls (Battelle and NCHH, 2004). In weak housing markets, owners needed to be offered grants. According to the 2004 retrospective study of eight grantees conducted by Battelle and NCHH, “One grantee, concerned with the need for affordable housing, made non-repayable (forgivable) loans available to property owners in combination with the cost-capped grant funds...Use of such an agreement, though, required that grantees first determine whether or not the local housing market is undergoing a radical change that might warrant use of liens or other title restrictions to ensure the treated units remain available as affordable housing” (Battelle and NCHH, 2004, p 30).

Interview Findings

Interviews with grantees corroborated the financing findings from the 1997 report and later studies. There was strong consensus that financing strategies needed to be tailored to local housing market conditions. Most interviewees offered deferred forgivable loans and several offered outright grants. A number of programs switched from low interest loans to grants or low- or no-interest deferred forgivable loans because they could not achieve sufficient enrollment to support production goals. One of the interviewees noted, “We previously tried loans, but found these difficult to ‘sell’ in housing stock with little value”. Another stated,

“Without grants we would not be able to generate interest (in the program.”

One grantee switched from a straight grant to a deferred forgivable loan. Several of the grantees with loan programs mentioned that administration of the loan could be complicated, and that it could be difficult to collect on

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deferred loans. One grantee suggested the option of using local banks to help in collection.

In addition to the more traditional financing options, some interviewees noted that their programs utilized “sweat equity” from an owner’s work on a unit and built that into their financing strategies. One grantee stated, “If the owner puts in money or does additional work to the property they can earn additional money for the property.” Another grantee noted that it gave outright grants up to a certain amount and if the estimate went over the grant cap, owners could provide sweat equity for certain allowable items to help bring costs down. This option can serve as an incentive for small rental unit projects, where owners “always do their own work.” For example, owners can prepare any non-lead surfaces and the project staff can estimate the value of this work. This strategy can reduce costs for the owner, and help move projects forward to the lead hazard control activities more quickly. However, owners needed to be given timelines and dropped from the program if they did not meet them (Sharon Pendleton, personal communication).

Best Practice - Alameda County and Milwaukee

Both Alameda County and Milwaukee use sweat equity as a means of “controlling costs” associated with lead hazard control. This technique tends to attract rental property owners to their program in lieu of the more typical loan packages. Alameda’s Primary Prevention Rental Program (the core of their lead hazard control program) requires that property owners provide a “match” for the grant funding. They allow this match to be sweat equity. The Milwaukee program, also focused on rental units, notifies owners that grant funds can only be used for window abatement/replacement, and all other interim control work must be paid by owner, or performed as sweat equity by the owner.

Interviewees reported a number of different models for integrating lead hazard control work with rehabilitation work including, working with CDBG and other public sources. Some jurisdictions set aside a dedicated “pot” of CDBG funds for lead hazard control. Others noted they are trying to get more involved with ongoing renovation projects in their communities. A number of grantees combined CDBG and lead hazard control funds to help owners make other necessary repairs at the home before lead hazard control takes place. One grantee noted that their local CDBG program only covers relocation costs.

Still others noted that they operate independently from CDBG programs. One grantee echoed the drawback to joint funding mentioned in the retrospective study: there were time lags and the grantee had less control over the problem. This led the grantee to create a “stand alone” program. One grantee noted that

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they occasionally packaged their work with weatherization programs. However, these funds were for “non-abatement” work only.

Lessons Learned

- Grantees need to assess what motivates an owner to participate and structure program services accordingly. The property owner is the direct applicant, without whom the project cannot move forward. Program experience indicates that desirable financing and technical assistance with contractors are strong motivators for owners to voluntarily enroll.
- Programs should make use of grants or deferred forgivable loans. Owners in many communities do not want to take on loans.
- Grantees must make the loan process as simple as possible. Program managers or designated program staff should be empowered to perform loan closings to ensure timeliness and minimal bureaucracy
- Programs should consider using a longer term affordable housing covenant, but they need to assess the amount of HUD funds going in to the unit (e.g., greater than \$5,000), the local housing market conditions, and what terms property owners will accept. HUD requires that units remain affordable for three years after the lead hazard control work is completed, but some communities with tight housing markets may want to extend that commitment. In less competitive housing markets, owners may be more amenable to a longer term covenant (such as up to five years).
- Programs can incorporate “sweat equity” into their financing strategies to help lower costs and increase enrollment. Owners do not want loans or liens on work they can safely carry out themselves. If this option is selected, it is important that the program also have lead-safe work practice training programs available to the owners before repairs are underway.
- When designing their programs, grantees need to explore whether joint lead hazard control and rehabilitation programs will expedite production of lead-safe housing in their communities. Joint lead hazard control and rehabilitation provides a method to support primary prevention. Each locality’s Consolidated Plan provides an opportunity for combining efforts.

c. Relocation

Original Findings

According to *Lessons Learned*, residents should be out of the work area when lead-based paint is being disturbed, and relocated when access to bathrooms and kitchens is restricted. Grantees are required to follow HUD relocation and re-occupancy guidelines in accordance with the federal Uniform Relocation Act (URA). Occupants are prohibited access to work areas or designated adjacent areas while lead hazard control activities are taking place. The guidance further states that residents cannot reoccupy a work area or adjacent area until post lead hazard reduction clearance standards have been met. Further, grantees must relocate from the building when lead hazard control

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work requires more than eight hours to complete (HUD 1993 Memo). However, the report also noted that within the parameters of the URA there was “still substantial leeway in how relocation (was) handled” (NCHH, 1997). Largely, decisions about program relocation services were dependent upon the expectation of local residents. What worked in one community would not necessarily work in another. *Lessons Learned* (1997, pp. 24-26) outlined several options for relocation:

High Cost/High Level of Program Responsibility
<ul style="list-style-type: none">• Set aside a lead-safe apartment to be used exclusively for relocation, set aside units in buildings undergoing rehabilitation to be used temporarily, or pay for hotels
Low Cost/High Level of Resident Responsibility
<ul style="list-style-type: none">• Do not pay for rooming costs but cover other incidentals involved with relocating, such as moving expenses, laundry, and food expenses. Programs may offer a cash payment bonus to families who will take the responsibility for relocation on themselves.• Provide furniture, moving, and storage.• Provide incentives.

Most programs used one or more of these options when designing relocation services. Programs reported that the high cost/high level of program responsibility options gave them greater control over the process and did not rely as much on tenant initiative. Programs noted that the low cost/high level of resident responsibility strategy was cheaper, but required more tenant initiative and could disrupt the construction schedule if things were not done in a timely fashion. Some programs provided furniture storage offsite while others had tenants move their furniture to the center of the rooms and sealed them with polyvinyl. One grantee reported using onsite storage containers, which families loaded and locked with their own lock. The containers were then taken offsite during the work. Programs also found that providing incentives (such as cash, meal vouchers, movie vouchers) helped to facilitate relocation because it reduced inconvenience to families who otherwise might have been reluctant to participate.

Some programs chose different strategies for owner-occupants and renters since temporary relocation assistance was not required for owner-occupants under the URA. Some programs offered owner-occupants incentives or simply made relocation a requirement to receiving lead hazard control funding.

An important overall finding was that “relocation (was) very disruptive to residents’ lives. Almost all of the programs underestimated the problems, time delays, and cost that (were) involved. Households refusing to cooperate can hold up construction...Programs have found that sensitivity to residents’ needs is a prerequisite for their cooperation” (NCHH, 1997, p. 26).

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Literature Update

More recent studies corroborated the relocation practices cited in *Lessons Learned*. Most grantees reported using some combination of those relocation options; however, another relocation option was now also being used. Some grantees reported planning jobs to ensure vacancy of a unit only during normal work hours. This day-to-day relocation plan generally presented fewer difficulties and frequently included incentives for the family (Battelle and NCHH, 2004). Typically, this model only applied to units where lower level lead hazard control measures were being undertaken. Relocation is not required when the lead hazard control activities are of a limited scope, such as cleaning affected surfaces or spot paint stabilization. When grantees do not relocate families, the federal guidance requires detailed descriptions of their occupant safety strategies (Wilson, 2003).

Recent studies support the *Lessons Learned* finding that relocation is complicated and can pose a barrier to production. According to the 2004 retrospective study of grantees, household relocation often creates delays in workflow and requires increased staff efforts (Battelle and NCHH, 2004). Unless the program provides suitable relocation accommodations, families might resist vacating their homes, resulting in delays until their needs are met. An important goal is to relocate the residents with as little disruption and inconvenience to the residents as possible (Battelle and NCHH, 2004).

NCHH staff conducted additional interviews in 2002 with 15 relocation programs, including some HUD LHC grantees. From those interviews, seven very useful “lessons learned” emerged that offer grantees practical guidance for how to handle the temporary relocation of occupants:

- “Lead hazard control work conducted in conjunction with other work takes far less relocation time than rehabilitation work. Efficient and organized contractors are able to streamline work with substantial planning and coordination upfront. Responsible contractors were also willing to sign agreements to complete the work in a timely manner and not disturb household belongings.
- Families need assistance in preparing to move, even temporarily....
- Agreements should also be signed with occupants to prevent them from making unsafe entry into their own dwelling while work is being conducted.
- Assigning a full time staff person to answer families’ questions and address issues of concern, such as security, prevents project delays and improves tenant satisfaction.
- Programs managed relocation expenses by getting signed agreements with hotels, movers, and other service providers prior to relocation.
- On-site ... project monitoring of the lead hazard control work helps grantees track progress, prevent delays, and reduce property damage.
- Caring for family pets during relocation can be handled in a number of ways. Pets can stay at relocation sites where permitted, or be kenneled, or

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stay with a friend. Programs can reimburse pet boarding costs when necessary (Wilson, 2003, p. 42).

Interview Findings

Interviews confirmed that there are a number of different models for relocation. Program decisions about whether residents can remain in their homes vary based on federal, state and local laws, and the level of lead hazard control work being done. Three grantees noted that most of their projects required residents to be out of the unit only during the day, and that the work could be completed in 2-3 days. Most programs did not allow tenants to remain anywhere in the unit during work.

Grantees need to weigh relocation decisions against local regulations, availability of affordable, temporary lead-safe housing, and production demands. Grantees that required relocation out of the home reported a wide range in percentage of units needing this service, from as low as 5% to as great as 100%. The length of this relocation ranged from three days to up to two months. When longer relocation is required, grantees must determine what model, or combination of models, will work best in their localities. Most programs reported using a combination of strategies to house residents, with preference given to residents' making their own relocation arrangements and receiving a daily stipend. Stipends ranged from entertainment vouchers to \$5/day/per person for food to as much as \$250 for the entire relocation period. Some of the grantees had contracts with hotels to provide rooms for tenants during the lead hazard control work. Hotels can be prohibitively expensive if a grantee is located in a major city. Some grantees have owners with enough vacancies that they can relocate a tenant within the same building or another building during relocation. One rented lead-safe apartments to temporarily house residents. Programs offered a range of additional services – from transportation to the relocation site to kenneling for pets. Grantees estimate total relocation costs per unit ranging from \$130 – \$4,000.

Interviewees also noted that it is helpful to establish policies about lost, stolen, or damaged tenant property to prevent disputes between contractors and tenants. Some grantees, or their contractors, videotape the unit before lead hazard control to document presence and condition of belongings. Many programs encourage tenants to bring valuables with them and store them somewhere other than their homes during work. Grantees also encourage tenants to take photographs of their remaining belongings.

Best Practice – Cuyahoga County

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The Cuyahoga County program videotapes properties before work occurs. They instruct tenants to take their valuable with them and then they videotape the larger items that are not removed. They also write down the serial numbers of such items. The program also offers a relocation handbook that has been utilized by other programs.

“If we see a pattern (of property damage or loss) from certain contractors we deal with that, but it is hard because it is ‘he said, she said’ unless there are photos.”

Lessons Learned

In addition to those noted in the Literature Findings section, grantees have learned the following lessons from their relocation experiences:

- Grantees need to walk tenants through the process. For example, some programs have found it helpful to show families photos of what a house looks like when it is properly packed and when it is contained by contractors before lead hazard control. Others walk through the housing unit and specifically identify what needs to be moved or packed to give the tenant more concrete examples about what and how to pack. Visual aides are also helpful if programs are working with a low English literacy population. When units are packed well and tenants are well prepared for relocation, construction delays are avoided and families get back home to a lead-safe unit sooner.
- Programs should avoid disputes through systematizing relocation processes. For example, using a tenant agreement to ensure that there is a clear understanding of both tenant and program rights and responsibilities during relocation and providing a method for tenants to document the belongings remaining in the unit during the work.
- Grantees should reduce relocation time as much as possible. Sometimes tenants can return to their homes at the end of the workday, dependent upon local regulations, the level of the lead hazard control intervention being conducted, and access to bathrooms and kitchens.
- Programs must include contractor responsibility clauses with monetary penalties assigned for failure to complete work on schedule. It is important that the contractor have a vested interest in getting the work completed on time.

d. Contractor Availability, Retention, and Cost

Original Findings

Lessons Learned identified ten related “Construction” topic areas that needed to be addressed:

- General requirements

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- Bidding system
- How to package projects
- Parties to the contract
- Construction management
- Using lead trained and certified contractors vs. non-certified contractors
- Using owners as contractors
- Structuring payments to contractors
- Monitoring
- Increasing the number of trained and certified contractors

All of these issues ultimately related to a program's ability to secure and retain contractors while still controlling construction costs. *Lessons Learned* found that almost all housing rehabilitation programs had experienced difficulty in finding competent, responsible contractors. This problem was magnified when trying to find contractors with lead hazard control training or certification. The report noted that there were not enough contractors trained and certified to do lead work, and those who were trained had little actual field experience or experience in pricing. Several programs found that contractors attracted to lead hazard control often came from the asbestos field and had little experience in housing rehabilitation. While they knew how to handle hazardous materials, they often lacked basic carpentry skills (NCHH, 1997, p 22). Given that many lead hazard control tasks involve carpentry skills (e.g., replacing woodwork, installing windows), unskilled workers affected the quality and length of the job. Unacceptable craftsmanship leads to "call backs" to repair mistakes. Programs provided incentives to properly train workers, but these efforts did not increase the contractor supply to meet short-term demands.

The exception was communities where there were comprehensive lead laws. *Lesson Learned* found that programs faced different sets of problems depending upon whether there were existing laws and an existing contractor community. Comprehensive laws created "a market for trained and certified ...lead hazard control contractors and workers" (NCHH, 1977, p.3). Given that grantees need a good contractor pool to complete the work on time and for a competitive price, access to trained contractors is critical to the program's success.

Programs approached contracting in different ways. While almost all programs used outside contractors to complete the lead hazard control work, there was great variety in the way contractors were brought in to the program, contracts were structured, and bids were let. A number of programs developed lists of approved contractors who had been screened on several criteria such as licensing and insurance. Owners chose contractors off the pre-approved list, jobs were given to the pre-approved contractors on a rotating basis, or jobs

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went out to bid only to pre-approved contractors. Some programs consolidated all projects into one bid. Others consolidated smaller groups of projects into bid packages. Still others bid each job separately. Most programs then used a written contract between owner and contractor to reduce program liability. “Most programs maintained a close hand in the process, reviewing bids, providing advice to owners, and approving contracts before they were signed. Most programs felt they could get a better price from contractors than owners could, because they were more familiar with costs” (NCHH, 1997, p 30). The report made no distinction between programs on the basis of size or region.

The report noted that programs had employed a variety of lead hazard control strategies. These included low-cost strategies (clean only or wet scrape and paint only most obvious hazards), middle-cost strategies (using a variety of interim controls) or high-cost strategies (using a mixture of interim controls or abatement or full abatement). Some programs tried to address all lead hazards while others addressed as many hazards as they could up to a certain pre-set dollar limit. Programs limits ranged from \$2,000 to \$15,000. Still others chose a specific set of lead hazard control measures and implemented those and only those measures. Clearly, costs varied greatly among program based on strategies employed (NCHH, 1997, pp. 14-15).

Literature Update

Today many programs continue to experience a lack of competent lead hazard control contractors. There tend to be fewer contractors in communities where there had historically been less lead hazard control (Battelle and NCHH, 2004). Programs reported using a variety of means including incentives, free training, and specific recruitment of unemployed people into worker training programs to try and increase the contractor supply. The study found, “some of these techniques were modestly successful, but many efforts brought little improvement to deficiencies in contractor capacity” (Battelle and NCHH, 2004, p.30). Even in communities where there is an existing contractor pool, grantees often deal with competition to recruit quality bidders. If housing rehabilitation demand in the private market is strong, then public programs are competing with higher paying private customers to get contractors (Hegarty-Steck, personal communications). The effect of gentrification was not studied in the 2004 report, but merits future attention. The report also noted that all grantees had increased efforts to provide training in targeted very low income areas, but only two of those studied had been successful in increasing the number of people employed in construction.

The contracting process, including a variety of actions required to bring a project to the contract stage, often delayed progress for many grantees. The standard competitive bid process was burdensome and often took weeks to complete. However, grantees that used alternative models were more successful in managing workflow and meeting production goals. For example, by using well-estimated scopes of work that could be accepted or rejected by pre-qualified contractors, or by employing restricted bidding on any single

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project, two grantees dramatically reduced the time required to establish a contract, maintained a level of competitive cost containment and quality assurance, and encouraged contractors to participate through a more uniform distribution of work. The study also noted that when establishing treatment strategies and work specification, grantees needed to examine existing contractor capacities such as quality of work, ability to plan and schedule work, ability to execute specifications in a timely manner, and stability and dependability of work crews (Battelle and NCHH, 2004).

The 2004 retrospective study found that grantees instituted per unit price caps of \$5,000 to \$15,000, occasionally with caps on specific treatments. Some grantees required that cost estimates be no more than 10 to 20 percent above the independent program estimates or be within reasonable range of that estimate. Some grantees modified those price caps during the course of the program based on past bids, actual costs, price books and general location of the dwellings. One grantee reported setting its own cost estimates after discussions and negotiations with the contractor community. If contractors' bids did not meet program criteria, several grantees directly negotiated with contractors for a price reduction. Other grantees reported downgrading the scope of work to get the price within range (Battelle and NCHH, 2004). The study noted that direct negotiation rarely resulted in a reduced bid unless there was a reduction in the scope of work.

Interview Findings

Interviews with grantees reinforced the notion that programs need a solid contractor base and a streamlined contracting process to meet program goals. Many interviewees noted having started out with twenty to forty contractors on their lists, but now having a core group of five to ten active contractors (Interviews, 2005). Grantees noted continual effort to find new solutions to the problem of contractor recruitment and retention.

Best Practice - Milwaukee

The Milwaukee program has held two training classes for contractors to upgrade their carpentry skills in window abatement. The classes offer standards for excellence, networking opportunities, skills development, and opportunities for growth. Milwaukee also employs an innovative method for contractor retention. The grantee has an incentive compensation plan that rewards contractors on five core competencies. The two highest scoring contractors split a pot of money at the end of the quarter for documented quality work. The winning contractors receive a framed certificate and are acknowledged at quarterly contractor meetings..

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“It’s a narrow niche...(contractors) have to be capitalized to some degree...cannot be too small or too large because of the small profit margin...and have to be accredited and licensed.”

Many participants have developed streamlined processes for bidding and contracting. Six programs used pre-qualification processes. Some programs sent bids only to contractors off the pre-approved list. Others distributed work to pre-approved contractors in turn using a program generated cost estimate. There was consensus among interviewees, regardless of bidding process used, that the ability to pay contractors on a timely basis was a significant obstacle. The majority of interviewees stressed the importance of timely, predictable payment cycles in order to retain contractors. Many interviewees experienced delays in contractor payment due to bureaucratic barriers, typically local purchasing procedures. Grantees who had experienced difficulties felt it had a very negative impact on contractor relations and ultimately unit production. One grantee uses a “pass-through” organization aligned with its health department to ensure that payments to contractors can be timely. Another grantee, on the other hand, has a long-standing agreement with the city’s comptroller office that allows payment invoices to be moved through the system more efficiently than most of their invoices, and payments are consistently processed in a timely manner.

Interviewees confirmed the cost findings in the 2004 retrospective study. The majority of participants employed price caps ranging from \$1,800 to \$15,000. The range reflects differences in costs between renovations in rental units versus whole-house renovations, as well as differences in scope of work approved. Some interviewees also used different price caps for owner-occupied versus rental units. Others used a total maximum dependent upon the number of units being treated. Most interviewees noted negotiating with contractors when necessary to reduce the scope of work in order to reduce the job cost.

Lessons Learned

There are several lessons learned in terms of contractor availability, retention, and cost:

- Programs need to pay contractors on time. Many small contractors can be overextended and rely on timely payment to cover outlays for building materials and to meet payroll. The contractor cannot maintain a stable workforce if he cannot pay the crew on a weekly or biweekly schedule and this can affect the completion of other projects.
- Grantees should maintain ongoing personal contacts with contractors. For example, they should call contractors to let them know when there are bid packages pending. If the grantee does not use a pre-bid qualification process, the programs should encourage as many contractors as possible to bid on program projects

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- Programs need to work with under-performing contractors on the job to help them understand what the program is looking for. Helping contractors improve on quality and workmanship is a worthwhile investment of program staff resources. Some grantees view the contractors as a vital extension of their programs and work with them almost as they would employees. As they moved toward increased unit production, grantees may find this is an important adjunct to increased training of new workers.
- Grantees should use per-unit or per-treatment price caps as a means of controlling costs.
- Programs need to consider an alternative process to the usual bid/contract process. “Unit-pricing” is a form of estimating and awarding contracts that greatly speeds up production, and can be effectively used on less-extensive projects. It saves time, and produces a fair market for the contractor.
- Grantees should conduct a thorough walk-through after the work has been completed and provide contractors with a complete “punch list” to help contractors reduce “call backs.”
- Programs need to consistently assess the capacity of their contractor pool and recruit new contractors if necessary. By providing free or low cost training to contractors, programs can help to create an ongoing contractor pool. There is a fine balance between contractors and work available: too many contractors bidding on too few projects, the contractors may leave the program. HUD supports using a lead hazard control program as a vehicle to increase employment of very low-income people. Section 3 advocates for such training to support the labor market, especially among the small, low-income business community.
- Programs need to be mindful of their local contractor market. Grantees compete with the private market for good contractors. Sometimes contractors stop bidding on grantee projects because private jobs are perceived as having more profitable, less job oversight and less bureaucracy.
- Grantees should carry out on-site monitoring to ensure good contractor performance. Having a daily presence on the job-site allows programs to resolve construction issues quickly, and assures that lead-safe work practices are being followed.

e. Production

Original Findings

Production was not a specific program element discussed in *Lessons Learned*. However, unit production has always been a major benchmark under the HUD lead hazard control reporting system and a priority of grantees. Production is important because it translates into more lead-safe homes for young children at-risk. Production has also become increasingly important in terms of grantee performance ratings and HUD reporting. Grantees must stay on track with production goals to complete grant commitments on time and on budget.

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Literature Update

The 2004 retrospective study noted that there are many components to a lead hazard control program that affect how quickly target housing is treated for lead hazards. The study noted, “Productivity increases when grantees conduct proper planning for each step in the program, while anticipating as many potential difficulties as possible and preparing alternative plans for untoward circumstances” (Battelle and NCHH, 2004, p. 25). Grantees that anticipated bottlenecks or slowdowns in operations and provided an alternative pathway to proceed were more likely to meet production goals. The following areas were cited as important to avoiding delays in production: target areas and eligibility criteria; staff capacity; relocation procedures; contracting process; and partnering with property owners.

As noted in section “Eligibility and Intake” above, establishing target areas and effective eligibility criteria is important. It is the grantee’s first opportunity to set a successful pace for unit production. The study found that grantees that selected less-restrictive eligibility criteria were more likely to achieve a sufficient pool of applicants in the earlier phases of their grant.

The 2004 report noted that staff capacity was essential to production. Grantees cited the need for adequate staff to perform critical activities. One technique cited was cross-training staff to perform multiple roles so they could assist one another during peak workflow. Another grantee noted that they contracted on a “services-as-needed” basis with an outside group to assist with technical tasks (such as risk assessment, spec writing, or project monitoring) during high work times.

As noted in section “Relocation” above, household relocation can create delays in workflow. The 2004 study noted that unless a program provides suitable relocation accommodations, families might resist vacating their homes, resulting in delays until their needs are met. As discussed under section “Contractor Availability, Retention, and Cost,” the contracting process can result in a slow moving process for many grantees. Grantees that employed alternative models to the more traditional CDBG-based contracting model were more efficient in managing workflow and meeting production goals.

The study also suggested that partnering with property owners could help to increase production when the owner had more than one rental property. One grantee encouraged property owners to actively participate in repairing deficiencies and deteriorated surfaces other than windows. The report noted, “This ‘windows-only’ project efficiently produced multiple lead-safe units in the city’s urban core where more of the affordable housing was located” (Battelle and NCHH, 2004, p.28).

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Interview Findings

All interviewed grantees expressed the common desire to create as many lead-safe units as possible. Interviewees were highly committed to the mission of the lead hazard control program. However, many grantees also noted the ongoing challenge of maintaining steady unit production. Programs continue to struggle with obstacles to efficient production.

Interviewees noted that virtually all aspects of service delivery can negatively impact unit production, including owner or tenant delays in submitting paperwork, lengthy wait for the historical review, delays in the inspection process, tenant failure to provide access to the unit, lack of available relocation housing, out-of-state or hard-to-reach owners, contractors who lack a consistent crew, and inclement weather.

The majority observed that their program staff worked hard to keep communications open between tenants, owners, and contractors. Because word-of-mouth was often an important recruitment tool, a negative experience on any party's part might affect subsequent production. One grantee observed: "Involve the contractors in a more pro-active role so they become invested"

Participants continued to echo earlier reports' findings on the importance of regularly monitoring progress to stay on track with production goals. "If a program sets up with a really good data system from the get-go, it can produce up-to-the minute information about process and progress to help monitor how things are going." Programs need to troubleshoot and resolve problems quickly. All enrolled units need to be tracked step by step until unit completion.

Best Practice – Syracuse

The Syracuse program has a database, Lead Track Pro, created just for lead hazard control work. All program information is on the computer and the manager can see where a project is in the process at any given time. They are able to manage projects daily and assess where any problems lie. The ability to immediately resolve any "hold ups" helps Syracuse to keep projects moving. A sample tracking EXCEL spreadsheet is also available on the HUD website:

http://www.hud.gov/offices/lead/lhc/startup/startup_guidance.cfm.

The majority of the grantees interviewed had a relatively large pool of applicants (ranging from 25 to over 100) awaiting construction. One grantee noted that creating a "steady pace" of work for contractors was important. This grantee noted that production could be "managed" if there was a balance of more extensive treatment projects with projects of a more limited scope. By pairing such projects, a program can control the pace and demand on the contractor pool.

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“Managing the bulge in the snake is important. Really think through the production process and pay attention to it... Consider it on a weekly basis to see where projects are and to keep it moving.”

Another grantee observed that it was important to evaluate the program’s progress early in the grant period, and to recognize that the original design may have to be modified: “First time round, you have to accept that your original plan (grant) is going to change – identify barriers and jump on them.”

Lessons Learned

There are several lessons learned in terms of production:

- Programs need to ensure that they attract applicants who can meet their eligibility requirements. Marketing of the program is essential to building momentum and production. Start with a big effort to establish a large applicant pool so that there is a viable supply of applicants to meet production needs.
- Grantees must track projects daily or weekly. Project tracking systems are needed. Some grantees have developed their own software systems to track projects
- Programs should do on-site monitoring of contractors to keep projects on schedule. Having a daily presence on the job-site enables programs to flag construction issues and intervene quickly when jobs are falling behind schedule.
- Grantees need to be responsive. If production lags, programs must quickly assess the situation and formulate a plan to resolve the problem. Programs cannot afford major disruptions to production. Even long standing programs need to be vigilant.
- Program staff needs to have a “facilitative” mindset and approach. Field staff needs to coordinate with all involved parties (such as tenants, owners, contractors.)
- Programs should explore partnering with property owners to help reduce costs and accelerate production. In localities where regulations permit, owners can be trained to do certain lead-safe work.
- Programs should consider a variety of techniques to enhance the contracting process such as unit pricing, bundled bids, rotation of bid opportunities, as well as the traditional bid process.
- Grantees should consider “feeding” simpler jobs into the production schedule along with more complex projects that have longer completion times. This strategy can provide work opportunities for both smaller contractors and those with larger crews, providing each with a chance to perform at tasks in which they are most competent.
- Programs need to consider the impact of “open contracts” (i.e., non-completed projects) on production. If contractors are allowed to bid and begin new projects while under contract for jobs showing “incomplete

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status,” systems become more complex than necessary. Furthermore competing contractors without work become frustrated with lack of opportunities. It is advisable to strictly limit the number of contracts “open” to any one contractor. Interviewees achieved this through the eligibility criteria they established for the bid process.

f. Outreach and Education

Original Findings

Lessons Learned reported that education and information campaigns were critically important components of efforts to reduce childhood lead poisoning and found that grantees were carrying out a variety of activities with widely varying costs. Items listed as public information and education efforts included:

- Resident education and training
- Professional information and education efforts
- Community-based activities

Public information and education efforts included materials development, media campaigns, and direct consumer training. Some grantees elected to distribute information to the general public through hospitals, community organizations, and schools, using posters and brochures developed for their programs (NCHH, 1997). Others also used media such as radio, newspapers, and television to reach the general public. A number of grantees reported access to free advertising deployed as public service announcements and received *pro bono* assistance from advertising agencies.

Another, more targeted strategy was resident education and training, which was sometimes combined with lead hazard control strategies. Program activities ranged from one-on-one education about nutrition and lead-specific cleaning in the home to providing cleaning supplies and demonstrations to residents. Specific cleaning demonstrations were used to encourage and underscore the importance of on-going maintenance of a lead-safe unit through day-to-day cleaning practices (NCHH, 1997).

Lessons Learned recommended direct outreach and education to the medical community and housing professionals (such as government/housing agencies, rental property owners and their associations, and property managers). Some grantees provided direct outreach to physician’s offices, hospitals, and medical seminars. At that time, few housing agencies (outside of the local lead program) knew or cared about lead hazard control. This situation compelled some programs to focus educational efforts to raise lead hazard awareness and encourage appropriate agency support through modest actions within existing programs (NCHH, 1997).

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To establish community infrastructure and networks, outreach and educational strategies often involved neighborhood residents. Grantees reported funding these outreach activities through community-based organizations, anticipating that their local connections to the neighborhoods would improve the success of education and outreach. “One group trained parents to train others, believing that the best way to get the word out about lead hazard control was from one concerned parent to another” (NCHH, 1997, p.35). Some grantees used community social service centers while one grantee used a statewide advocacy group.

Literature Update

Well-planned, strategic activities are a useful means for raising community awareness and generating housing referrals to lead hazard reduction program. With a goal of primary prevention, grantees educated the community and service providers to identify and address hazardous conditions before a child is exposed to lead (ICF, 2004). Informed community members also provided a referral source for families in need of services. Without an effective outreach and education strategy, programs experienced insufficient community support and low program enrollment.

Since the onset of federally-supported lead hazard control programs, a substantial library of information, printed material, visual aides, and well-documented strategies and techniques has been developed. Many of these materials are available for the asking, and some are easily found through the electronic media. ICF Consulting and NCHH surveyed nine lead hazard control grantees with successful outreach programs. Outreach methods were grouped in to five categories:

- Community outreach
- “Earned media”
- Advertising
- Collateral materials and education campaign props
- Infrastructure/support.

Community outreach venues included small groups, community events or fairs, door-to-door canvassing, and obtaining referrals from existing programs. “Earned media” included public service announcements as well as media stories either on television, on the radio, or in print. Advertising included paid advertisements on billboards, buses, or other locations as well as point-of-purchase advertising through store displays. Collateral materials included brochures and printed materials, visual presentations, giveaways, mascots, and cleaning kits. Valuable infrastructure included telephone hotlines and web sites. These items enhanced grantee capacity for enrollment and general education efforts (ICF, 2004).

Several key themes emerged from the study:

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- The most effective and common methods for generating program enrollments were participation in community events and presentations at small group meetings.
- Media activities helped raise awareness and increase program recognition, but generally did not result in significant program enrollment. However, media events were useful in increasing program recognition and credibility.
- Grantees who were not well known and respected, or not culturally and linguistically representative of the target community, struggled to implement outreach activities.
- If grantees subcontracted outreach work, consistent communication and coordination were necessary.
- Subcontractors whose primary missions were unrelated to lead poisoning prevention often had less success in the community. Subcontractors needed to understand the grantee's program to effectively educate and enroll clients.
- Grantees needed to have a well functioning lead hazard control program for referrals for subcontractors to be effective in their outreach work. Applicants needed to have a good experience working with the grantee (ICF, 2004).

Interview Findings

Interviewees used some combination of the outreach methods noted in the 2004 ICF study. There were a few examples of new outreach approaches.

Best Practice – New York City

New York City uses a "Handivan" equipped with an educational replica of a typical apartment including "touch and feel" information. The van can go to targeted areas and community events. The apartment display can move on to a raised platform and be viewed from the exterior. It has also purchased simulcast equipment and has its own training center so that staff can do PowerPoint presentations off-site in target areas and can conduct neighborhood-based lead certification trainings.

Best Practice – Philadelphia

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Philadelphia worked with its sub grantee, National Nursing Center Consortium, toward increasing enrollment of at-risk households with newborn babies present. The Philadelphia program recruited a local journalist as a speaker for their kick-off of this new "Lead Safe Babies" initiative. Engaging a journalist helped the program to yield further media coverage for the initiative.

Best Practice – Syracuse

The Syracuse program worked with two local dairies to produce school milk cartons with a lead poisoning prevention message. This printed message became a visual aid and a subtle reminder for the school-age child who drank milk from the cartons. Syracuse also uses a turtle mascot on materials targeted to children.

Lessons Learned

Evaluations of grantees experiences have yielded a number of useful outreach and education strategies, including the following:

- Grantees should develop an outreach and education plan as an essential part of their lead hazard control programs. When planning, programs need to be culturally and linguistically sensitive, as well as targeted in their efforts.
- Programs must devote adequate staff hours to implementing outreach and education objectives. Simply providing brochures to local venues is not enough.
- Grantees need to network with existing providers and key community leaders. Collaborate with others on events and use existing venues. Go with the crowd; do not make the crowd come to you.
- Grantees should create or borrow good communication tools. Numerous written materials exist. Programs need to look at what has already been developed in their own and other communities before creating new brochures or pamphlets. Existing grantees have a plethora of materials to borrow from.
- Program outreach efforts must repeatedly get the message out. Grantees cannot assume that people know about their programs or the problem of childhood lead poisoning. Use the media to continue to help get the word out.
- Grantees need to be creative. Programs need to look beyond the typical outreach activities (e.g., community health fairs) and have a presence in other venues as well (such as supermarket, barber shop, shopping mall, post office, train station, ad on side of garbage trucks, or bus stop) at times convenient to the target audience.

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- Programs must “get noticed”. Grantees can use tools such as mascots, or give-aways to make more of a “splash”. Programs are often competing with other visual stimuli and need to do something to “get noticed.” Program staff needs to step out from behind the display table and interact with the public.

i. Working with Faith Based Organizations

To support the HUCUP Lead Technical Study and to respond to the growing government priorities related to working with faith-based organizations, NCHH included several questions about the subject in its interview tool. The majority of the grantees did not have formal relationships with faith-based organizations and those who did tended to coordinate with faith-based groups on outreach activities, as opposed to other program areas such as construction or relocation.

Four grantees had contractual relationships or formal partnerships with faith-based organizations. One interviewee described a significant partnership with two faith-based organizations. The organizations had an existing interest in housing issues and operated programs within the grantee’s target area. The interviewee noted that faith-based groups needed to be approached like any other non-profit organization, with awareness that they have their own missions, board of directors, and funding needs. Grantees need to find commonalities between their program needs and faith-based groups’ missions.

“[The faith-based group] was engaged in other housing issues over a period of time and they were a natural fit [with our program].”

Best Practice – Alameda County

The Alameda County program partners with faith-based organizations on everything from translation to training to focus groups. They identified tasks within their program plan that they thought the group could help them with. For example, the faith-based group was already working with the program’s target population, so they were successful at bringing in those community members for program focus groups.

Another grantee contracted with a faith-based group to provide door-to-door housing outreach and advocacy. This grantee noted that the faith-based organizations possess a high level of trust within the neighborhood, even with landlords. The group’s good will in community came from its other programs, such as food pantries. The grantee noted that landlords might not even realize initially that the faith-based group was facilitating the city’s lead program

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because such groups are perceived as having broad interest in the community and less of an agenda than the program itself.

The majority of the grantees have informal relationships with faith-based organizations. Grantees reported providing faith-based groups with information and materials. They also participated in faith-based sponsored community events. One grantee works with faith-based groups indirectly through community-based organizations with which the grantee had contracted for outreach, education, and referral services. In turn, these community-based groups worked with local faith-based groups as part of their effort.

One barrier to working with faith-based groups is understaffing. All four grantees who have formal relationships with faith-based groups reported that the groups relied heavily on volunteers. High turnover, limited funding, and small permanent staffs with many tasks that draw them away from lead-related outreach work can all affect the groups' ability to support programs' efforts. One grantee, noted that "Faith-based organizations typically lack the administrative infrastructure to proceed easily within the bureaucratic parameters required by federal program guidelines and city administrative rules [invoicing work cited as example]." Another grantee, however, found that although there were challenges in terms of staffing, the faith-based groups were always able to draw upon and replenish from their volunteers.

Lessons Learned

All of the lessons learned listed below are drawn from grantee interviews for this report:

- Grantees should work with faith-based organizations to develop a more intimate link to the community. They are able to reach residents because they have a greater level of trust in the community.
- Programs should reach out to faith-based organizations that have an interest in housing. Such groups have been cited as effective partners for grantees. However, if faith-based groups do not have a link to the housing issues, their other responsibilities in the community may limit their ability to serve as partners for grantees.
- Grantees need to provide substantial assistance and training to faith-based organizations to set up administrative systems for performance contracts. Faith-based organizations sometimes lack the administrative infrastructure necessary to respond to the extensive documentation required by federal program guidelines and local government.
- Programs need to understand that high turnover of staff and or volunteers can be a problem with faith-based organizations. Grantees need to plan for potential disruptions to staffing.

Conclusions

Starting up and managing a lead hazard control program is a complex and challenging endeavor. As noted in *Lessons Learned*, “Fortunately there are a number of programs that have struggled with these activities already, and have devised solutions. Along the way, they have discarded methods that were unsuccessful and modified others in order to build strong, effective programs. Many are still struggling to improve their programs. Perhaps the most significant lesson learned is that setting up a lead hazard control program is a complicated affair involving many competing interests, which takes significant time and thought” (NCHH, 1997, p.6). There are a number of universal lessons to be learned in addition to the program element specific lessons noted above.

- *Primary prevention* – Primary prevention is the essence of a good lead hazard control program. Programs need to educate the community and treat housing before children are exposed to lead hazards. This might include educating at-risk households and property owners to identify potential sources of lead dust and to make lead-safe repairs.
- *Customer service orientation improves effectiveness* – Programs need to be responsive and have the will to make a difference. It cannot be just another city program. Grantees must listen to groups to understand what motivates them to participate. When problems arise, they must show efforts to modify or correct deficiencies and establish relationships and build credibility with communities.
- *Staffing* – It is critical to have staff with strong interpersonal skills. Because program staff need to work closely with many different groups – owners, tenants, contractors, community agencies –they need to have strong communication, conflict resolution, and problem-solving skills.
- *Pressure for production* – The pressure for unit production increases the need for programs to assess potential barriers and bottlenecks and to develop alternative strategies to avoid construction delays. Grantees report that they are very challenged by the strong demand for unit production.
- *Program management* – Lead hazard control programs are unique in that they encompass a wide range of services that often require different skill sets. It is important for managers to have some or all of these technical skills, but equally if not more important, managers need to have strong decision-making and leadership capabilities.
- *Partnership with health and housing* – One grantee noted, “The keystone is relationship between health and housing departments. Strengthen that partnership.” Health and housing agencies need to work in tandem to

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achieve their primary prevention goals. Neither agency can afford to have turf issues.

- *Flexibility and responsiveness* – Programs need to be adaptable and not feel wedded to their original program model. “Initial stages of a new program are ‘works in progress’ and programs need flexibility to meet the goals when benchmarks are not being met as planned.
- *Local support* – Programs need local support. One grantee noted, “you need to have the support of your community and of the leadership in that community whether it’s a mayor or municipal clerk of the works, who ever is in charge.” A supportive environment provides program managers with opportunity to be creative and adaptive. Programs can build political momentum through direct contact with leadership and community groups. Collaborative activities foster positive interactions and support program mission.
- *Be neutral, be fair* – Both owners and tenants must believe, and experience, that the program has no bias toward either group. The tenant and property owner relationship can make or break a project. One grantee noted, “We can be victimized by the nature of the relationship between the landlord and tenant.” Programs need to walk a fine line between both groups and emphasize that the common goal is to prevent childhood lead poisoning and create a lead-safe unit.
- *Put yourself in their shoes* – When planning program services and policies, grantees advise programs to put themselves in the shoes of their target audiences. They recommended thinking like a property owner when planning program eligibility and intake – where do they go? What would get them to enroll? What is in it for them? What do they value? Thinking like a tenant when planning for intake and relocation can help a program imagine packing up children and belongings and what it’s like to have strangers coming in and out of the home.
- *Toot your own horn* – It is vital to track your projects for production and HUD reporting purposes, but it is also useful to be able to show the community and political leaders what the program has accomplished. Programs need to self-promote in order to ensure local support.
- *Learn from others* - Grantees are a committed group of people who share the same goal and are willing to share their experiences. “New grantees need help from old grantees.” Existing grantees are generous with their knowledge, but are also busy managing their programs. The Alliance for Healthy Homes operates a listserv called Leadnet and this is an excellent forum for existing grantees and other lead professionals to share information.

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In summary, while grantees continue to struggle with issues first identified in the NCHH 1997 report, the most successful programs have grown to encompass multiple partners, a more diverse target population, and a larger number of units in production. One key to this success is their willingness to continually re-evaluate procedures and program outcomes. “Programs need to be very familiar with their housing stock, demographics, contracting, etc., so that they can plan and implement a focused, effective lead hazard control program with health-measured outcomes. This will lead to lower-cost interventions and simpler systems in which to work.”

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