

US EPA ARCHIVE DOCUMENT

2. Home Lead Hazard Reduction Program (HLHRP)

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■ Program Development and Implementation

Overview

This program was developed as a joint effort by the Portland Water Bureau (PWB), the Multnomah County Health Department (MCHD) and the Oregon Health Division (OHD). Through use of an AmeriCorps team, Comprehensive Lead Education and Reduction Corps or CLEARCorps, this program is also a private and public partnership.

Appendix 2-1 (Intergovernmental Agreement Scope of Work) describes the services for which the Portland Water Bureau has contracted in order to develop and implement the Home Lead Hazard Reduction Program (HLHRP). This scope of work includes the description of services to support implementation of:

- the CLEARCorps program
- Public Education efforts implemented collaboratively with CLEARCorps
- and Evaluation of all program efforts

The Portland City Council gave unanimous approval to the intergovernmental agreement for services on December 17, 1997 (Appendix 2-2). The Multnomah County Health Department is managing the Portland CLEARCorps program, funded by the Water Bureau and a grant from the Corporation for National Service.

In Year 1, the focus is on implementing the program in Portland's Humboldt neighborhood, evaluating these pilot program efforts, and then using the knowledge gained to develop a model to expand the program to other neighborhoods in the Portland Water Bureau service area as effectively as possible. Total program duration is expected to be five years. The scope of work for Year 1 projects that 125 homes will be evaluated for lead paint and that in 60 of these homes, lead hazard reduction activities will take place.

Program Development (Appendix 2-1, Task 1, Activity 1)

Using data from the Oregon Health Division, the five Portland neighborhoods with the highest percentage of children with elevated blood lead levels (EBLLs) were identified for consideration for designation as the pilot neighborhood for the program. A set of criteria was then established which were used to objectively evaluate each of the five neighborhoods. In priority order, these criteria were:

- Percentage of children under 5 years of age with EBLLs
- Percentage of homes with children under 5 years of age
- Percentage of homes built prior to 1950
- Cultural diversity and number of minority groups represented

As a result of applying the criteria, Portland's Humboldt neighborhood was chosen for implementation of the program during the pilot year (July 1997 - August 1998).

The Portland CLEARCorps Team was recruited and trained in 1997 (Appendix 2-3). Additional Team members were recruited in 1998, and training for these Team members is in process and soon to be completed. Team recruitment is city-wide, but

places an emphasis on recruitment from Portland's North and Northeast neighborhoods where program efforts are currently targeted. Current Team enrollment is 11 members.

Training and development for Team members included (see also Appendix 2-3):

- Worker safety training (OSHA and issues directly related to lead control work)
- EPA-approved lead abatement worker training
- On-the-job (in-home) training in CLEARCorps protocols with a certified lead consultant
- Background and overview of Lead and Health issues
- Training on protocols required to achieve program Evaluation components and to collect good data
- Personal development (communication skills, cultural diversity, development of personal career portfolios, personal career goal setting)
- Training on accessing available resources in the community and from local and regional governments

The Portland CLEARCorps office has been established, and is based in the Humboldt community. This home has been equipped with computer and office equipment, and other equipment necessary to perform program activities. The facility also includes lead-safe residential space for program clients while the Team is working in their home.

Program protocols have been drafted (Appendix 2-4 for details) which describe:

- priorities for use of resources which identify potentially eligible homes, triage for handling referrals and requests, and conducting resident/owner interviews
- eligibility requirements for homes
- eligibility requirements for owners/occupants
- home lead assessments, hazard evaluation protocols, guidelines for determining what lead hazard reduction work is to be done in each home
- procedures for obtaining owner/occupant agreements
- procedures for collecting dust samples and conducting home evaluations
- protocols for developing a Risk Reduction Plan for each home
- forms for follow-up interviews with residents

Program protocols are being developed for:

- in-home lead safety education programs
- protocols for follow-up activities in the homes and with the owners/occupants

Program Implementation (Appendix 2-1, Task 1, Activity 3)

Recruitment of eligible homes is in progress using the established resources and protocols (Appendix 2.4). Approximately twenty homes have been identified for further evaluation and assessment, and recruitment is ongoing.

Lead Assessments and lead hazard reduction activities will begin in these home in March 1998. Assessments (Appendix 2-4) will include collection and analysis of dust, paint chip, and/or soil samples for lead content, visual inspections, and providing blood

lead testing of resident children.

When significant lead exposure risks are identified, and the necessary repair work and/or cleaning is determined to fall within the program's defined "interim lead hazard control" activities, these homes will be subjected to additional eligibility protocols (Appendix 2-4) and triaged into the program.

CLEARCorps Team members will provide in-place lead hazard management work to reduce lead-based paint hazards, including repair of deteriorated painted surfaces, repainting, replacing window beads and sashes, eliminating friction and impact points and specialized cleaning (HEPA vacuuming). All work will be performed in accordance with established protocols (Appendix 2-4).

During Year 1, it is projected that 125 homes will be evaluated for lead paint and that in 60 of these homes, lead hazard reduction activities and in-place hazard management work will take place.

CLEARCorps Team members will perform "interim lead hazard control" activities and will *not* be performing licensed lead abatement work. All CLEARCorps Team work is directed by a supervisor with qualifications meeting those specified in Oregon Administrative Rules, Chapter 333, Division 069 for Certification of Individuals and Firms Engaged in Lead-Based Paint Activities. All home lead assessments are performed in accordance with the requirements of OAR Chapter 333, Division 069 by a Home Lead Risk Evaluator who also meets the qualifications specified there. Assessed needs for lead abatement work, or any other necessary work which falls outside of HLHRP and CLEARCorps program guidelines, will be referred to Portland's HUD program (see "Linkage between the HLHRP and Portland's HUD program").

■ Evaluation of the HLHRP and Public Education Efforts

Overview

The program contains a significant and critical evaluation component. The Evaluation program component is being designed and implemented concurrently with other components of Portland's Lead Hazard Reduction Program to, from the onset, produce an effective and comprehensive program that is performance-based. All data gathering protocols are being designed so that the program's results will be measurable, and it will be possible to establish appropriate cause and effect relationships from the activities undertaken. Information and data collected will be collected in the formative year (Year 1), and then used to produce a model for this program to implement in Years 2 to 5. It is anticipated that the efforts will also produce a model which can be effectively used for the design and implementation of similar programs elsewhere.

The objectives of program evaluation are to:

- assure that the development and implementation of HLHRP activities will achieve the Water Bureau's public health, regulatory compliance, and stakeholder related objectives
- collect relevant program information
- analyze processes and results of program activities to develop an optimally effective program for Year 2 and beyond
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Management of Evaluation components of the program have been contracted with the Program Design and Evaluation Services (PDES) unit of the Multnomah County Health Department. A Review and Oversight Team has been established to provide on-going review of the design, implementation and outcomes of the key HLHRP components (HLHRP development and implementation, outreach and public education, evaluation, and the Lead Dust Prevalence Study). The Review and Oversight Team will make immediate recommendations to change program protocols as necessary to assure that all programmatic objectives are met. The Review and Oversight Team consists of:

- Principal Evaluator, John Dougherty, PDES
- Environmental Health Manager, Hilda Adams, Multnomah County Health Department (MCHD)
- Environmental Epidemiology Manager, Narda Tolentino, Oregon Health Division (OHD)
- HLHRP Manager, Chris Johnson, MCHD
- CLEARCorps Team Supervisor, Larry Ehrbar
- Program Coordinator, Stacey Drake Edwards, Portland Water Bureau
- Community member with public health expertise (yet to be named)

Linkages between the Review and Oversight Team and the Stakeholder Advisory Committee (see Section 3) will be established to further insure effective stakeholder involvement and needed programmatic changes and enhancements.

The following components of Portland Lead Hazard Reduction Program will be evaluated:

- The Home Lead Hazard Reduction Program
 - Neighborhood Outreach
 - Program Implementation
- Stakeholder Involvement, Public Education, and Outreach
- Expanded Free Lead in Water Testing

The Evaluation program component will provide written evaluation plans for program tasks and activities; a functioning evaluation team and data collection tools, data quality assurance protocols and data bases, and written reports of findings about the effectiveness of program activities in meeting the stated program objectives.

Evaluation activities are described in detail in Appendix 2-1, Intergovernmental Agreement Scope of Work, Task 3, Activities 1, 2, and 3.

Evaluation of the HLHRP Neighborhood Outreach Efforts (Appendix 2-1, Task 3, Activity 1A)

Objectives of the Evaluation of Neighborhood Outreach are to measure:

- the awareness and support for the CLEARCorps program from the communities in which it is implemented
- the impact of the outreach efforts on the level of knowledge about childhood lead safety
- the success in recruiting households for the CLEARCorps program (Data from the Household Dust Lead Study will be also be used to evaluate the effectiveness of household recruitment)

Current activities include:

- documentation of community contacts/presentations
- development of forms and gathering of data from household recruitment efforts
- development and implementation of forms for gathering household & community group survey/interview data
- development of the Evaluation Team, Evaluation tools, and Quality Assurance processes

Results of the evaluation will be summarized in reports on the findings which will include documentation of:

- the evaluation plan
- target populations reached
- knowledge retained
- changes in health/preventive behaviors
- the kinds and numbers of households interested in or volunteering to participate in the HLHRP
- community satisfaction with the educational and outreach efforts

Evaluation of the HLHRP Program Implementation Efforts (Appendix 2-1, Task 3, Activity 1B)

The objective of the Evaluation of HLHRP Program Implementation is to determine:

- the short- and long-term effectiveness of the CLEARCorps program's in-home activities (hazard identification repairs/cleaning, and education and follow-up) in identifying and reducing lead hazards

Data gathering and evaluation protocols are being designed to evaluate:

- environmental lead hazard data, such as results of "before" and "after" hazard evaluations, dust, soil, and blood tests, and client interviews
- client participation and satisfaction data

Results of the evaluation will be summarized in reports on the findings which will include documentation of:

- characteristics of households recruited and retained
- kinds of lead hazard controls and education provided
- baseline and post-intervention changes in home environmental lead levels
- changes in household knowledge and preventive behavior
- satisfaction with intervention and educational efforts

Evaluation of Public Education Efforts (Appendix 2-1, Task 3, Activity 2)

The objective of the Evaluation of Public Education efforts is to determine:

- the short- and long-term effectiveness of the efforts designed to raise awareness of persons in the Bull Run Service Area who care for young children (under six years of age) about the health risks of childhood lead exposure and ways to prevent or reduce exposure

Current activities include:

- design and development of questionnaires/surveys to be used to evaluate the Public Education efforts directed at 3 representative target audiences and populations (2 professional, 1 community) of about 50 persons each; evaluations will be administered at three to six months post-education

Future activities include:

- in-depth, ethnographic interviews of 10 members of a group that has been targeted with educational messages; surveys and interviews will determine:
 - the amount of the education that was understood and retained by the target audience
 - the beliefs and intentions that were modified by the educational messages
 - the changes in the recipient's health/prevention behavior that occurred in response to the information

Results of the evaluation will be summarized in reports on the findings which will include documentation of:

- percentage of target population reached
- information retained/concept recognition
- changes in knowledge of key lead hazard/prevention concepts
- changes in beliefs and/or intentions
- changes in health/preventive behaviors
- the incorporation of accurate lead hazard information in program activities of public health venues and community organizations

■ Household Dust Lead Prevalence Study

Overview

Efforts to design the Home Lead Hazard Reduction Program resulted in the realization that little, if any, information existed that quantified the magnitude and nature of the home lead problem in the Portland service area. Therefore, a Household Dust Lead Prevalence component was added to the program. The study is described in detail in Appendix 2-1 (Task 4).

The objectives of the Household Dust Lead Study are to:

- estimate the prevalence and magnitude of dust lead hazards in high-risk neighborhoods
- determine the characteristics of dwellings most likely to have dust lead hazards so that high-risk homes can be identified and residents can be recruited for participation in the HLHRP program more efficiently
- insure that resources are targeted wisely to a problem of known magnitude

Results of the study will be summarized in reports on the findings which will include identification of:

- prevalence and magnitude of dust lead hazards and levels
- characteristics of dwellings most likely to have dust lead hazards
- recommendations for HLHRP household recruitment strategies in Years 2 to 5 of the program

Results of the study will be made available to others, thus enabling the design of similar studies, or the application of the results to analogous situations.

Current and Planned Activities

A study plan is being developed which will identify:

- the number and characteristics of homes to be sampled
- the type and number of samples to be collected, sampling schedule, sampling and analytical protocols
- the plan for participant recruitment
- the plan for data analysis and interpretation, and communication of findings

Calculations have been performed which indicate that collection of data from 100-150 homes will produce a true population score at the 95% confidence level.

Outreach to the local chapter of Physicians for Social Responsibility has produced an offer from them to provide services for collection of blood samples for lead analysis.

Participants will be recruited, and the surveys will be conducted during the summer of 1998. Household information will be collected, and dust, soil and blood samples will be collected and analyzed for lead. Upon compilation of data, participants will be notified of analytical results, and provided with appropriate recommendations for lead hazard reduction in their home.

■ Linkage between the HLHRP and Portland's HUD program

Overview

The funding of Portland's HUD program resulted in a unique and beneficial opportunity to establish a linkage between that program and the HLHRP. The objective will be to provide an effective way to furnish more of the lead hazard control services which targeted and high risk homes need. The exact procedure for the linkage between the two programs is yet to be finalized.

Houses that are eligible for the HLHRP and where appropriate "interim lead hazard controls" costing less than \$2,500 are determined will be processed by the HLHRP. For houses requiring more extensive hazard control or abatement, a referral will be made to the HUD program for partial or full abatement, or other appropriate rehabilitation activities. The Portland Development Commission (PDC) which will be handling referrals for the HUD lead hazard control grant. All CLEARCorps referred housing units will be given priority consideration by PDC.

Referrals between the Two Programs, and Available HUD Services

Houses will be considered for enrollment in the HUD program either through the Neighborhood Preservation Program (NHP) for single occupancy dwellings or the Housing Development Finance Program (HDF) for multi-family units. A set number (to be determined) of HLHRP referred housing units with household income less than 50% of the median area income are guaranteed to receive no cost lead hazard control grants. For HLHRP referred units with income between 50% and 80% median area income, residents will be offered 0% deferred payment loans providing there is sufficient equity in the property. If sufficient equity is lacking, grants may also be considered. The maximum loan amount in such housing is \$4,000 for interim controls, \$11,000 for hazard abatement, and \$35,000 for full abatement.

Opportunities for Consistency and Coordination between Community Programs

A number of possible opportunities exist for coordination between the HLHRP, the HUD program, and other community programs. These possibilities are envisioned, and will be further investigated and implemented as appropriate as the HUD program is implemented:

- Consistent criteria for eligible housing
- Consistent process for selection and prioritization of housing units for hazard identification and control
- A broad spectrum of community activities for lead hazard Identification and control
 - The HLHRP provides risk assessment and interim lead hazard controls
 - The HUD-funded program could provide partial or full abatement, and other housing rehabilitation activities when appropriate
 - The HUD-funded program could provide temporary relocation of residents whose homes are undergoing more extensive lead hazard reduction (the HLHRP provides shorter term lead-safe residential space for program clients while the Team is working in their home)

- The HUD-funded program could be used to fund blood lead level screening of children in homes undergoing risk assessment and rehabilitation
- An additional focus for community outreach/education: The HUD-funded program could be focused on the housing industry and related interest groups (owners of rental properties, building maintenance contractors, etc.), while the HLHRP is focused on "at-risk" groups
- A list of units in which lead hazards have been controlled could be maintained as suitable housing for children under 6, and made available to agencies and families

■ **HLHRP Media Exposure**

The HLHRP has received significant, and positive, exposure in the media. As the intergovernmental agreement for services went before the Portland City Council on December 17, 1997, the program was highlighted in articles in *The Oregonian* (Appendix 2-5) and the *Daily Journal of Commerce* (Appendix 2.-6).

Critical community concerns about lead exposure and risk in the Portland area and the Home Lead Hazard Reduction Program were described in the *Willamette Week* on January 14, 1998 (Appendix 2.7).

An article on the Home Lead Hazard Reduction Program and Portland's proposal for compliance with the Lead and Copper Rule will appear in a future issue of *Deleading* magazine (anticipated to be published in April or May 1998).

A major press event for the Home Lead Hazard Reduction program will be held as the program is being implemented in the Humboldt community. Invitations and personal outreach will be extended to a wide variety of media outlets (television and print media).