2020 Lead and Healthy Homes Technical Studies Grant Awards

Arizona

Sonora Environmental Research Institute, Inc. will be awarded $624,250 to determine the effectiveness and longevity of healthy homes interventions and education for reducing unintentional injuries and fires resulting from housing-related hazards, and determining the barriers and incentives affecting future use of these cost-effective strategies. It builds on a previously awarded HUD Healthy Homes Production grant, which targeted a population of 2,985 low income households and provided home assessment utilizing the SERI Heathy Homes Rating System app followed by installation of smoke alarms and distribution of an educational packet highlighting methods to make residents' homes healthier. A subset of homes also received physical interventions for unintentional injuries and fires.

Contact Person/Authorizing Official: Ann Marie Wolf; annmarie@seriaz.org

Indiana

Indiana University, partnering with three HUD Lead Hazard Control Program grantees: the City of Greensboro, NC**;** City of Fort Wayne, IN**;** the Indiana Housing and Community Development Authority, and RTI International, will be awarded $449,995 to use existing databases to define a "lead exposome" – combining all of the potential contributors to lead exposure in one place and using machine learning algorithms to create predictive models. The study goals are to decrease reliance on children as a sentinel for identifying at-risk homes, increase the likelihood of preventing cognitive damage from lead exposure, and to focus spending on lead hazard control interventions where it will have the greatest effect.

Contact Person/Authorizing Official: Steven A. Martin; iuaward@iu.edu

The University of Notre Dame, partnering with Indiana University and Purdue University, Indianapolis, will be awarded $700,000 to further validate and scale-up a household lead screening kit to detect environmental lead hazards in two of Indiana's largest counties. The study's goal is to prove that their screening kit will make household lead risk assessments more cost-effective. The kit would do this by allowing health departments to target the expensive and time-consuming household lead risk assessments to homes that are most likely to contain the worst environmental lead hazards.

Contact Person/Authorizing Official: David L Ross; dross5@nd.edu

Kentucky .

University of Kentucky Research Foundation will be awarded $400,000 to evaluate resident perception of cockroach management in affordable housing, and develop and evaluate an accessible, resident centered cockroach management protocol. Researchers will develop a protocol to reduce cockroach populations in affordable housing communities by reshaping how cockroach management is implemented and sustained as well as centering control efforts on residents by placing them in a position to be champions for their own health.

Contact Person/Authorizing Official: Kim C. Carter; ospa@uky.edu

Louisiana

The Administrators of the Tulane Educational Fund will be awarded $999,019 to examine exposure to air pollution (black carbon, $PM_{2.5}$ and NO_2) in the homes of low-income adults, 60 years of age and older living in HUD subsidized housing in greater New Orleans. Personal monitoring of black carbon will also be conducted. The primary goal of the study is to assess the impact of indoor exposure to black carbon and cardiopulmonary health, with a focus on the potential effects on blood pressure and heart rate. Air pollutants chosen are those known to be combustion byproducts and thought to be predictors of adverse cardiovascular and respiratory outcomes.

Contact Person/Authorizing Official: Kathleen Kozar; elecnotf@tulane.edu

Maryland

John Hopkins University Center for Injury Research and Policy, partnering with the Green and Healthy Homes Initiative, will be awarded $999,871 to demonstrate and address the gap between what is known to work for preventing child home injuries and the uptake of those prevention approaches by high-risk families. The study team will use the CHASE Tool, developed by John Hopkins University, to assess child injury risks in low-income foster family homes, before and after implementation of evidence-based modifications, to document the time and cost burden to conduct the assessments on a large scale and the residents' willingness to accept the modifications.

Contact Person/Authorizing Official: Alexandra Albinak; jhura@jhu.edu

Massachusetts

Silent Spring Institute, Inc will be partnering with the City of Rochester (a HUD Lead Hazard Control Program grantee) to evaluate the effectiveness of integrating resident engagement in homes participating in lead and healthy homes rehab programs to sustainably improve housing conditions and to evaluate the combined influence of housing rehabilitation and resident engagement on exposures to semi-volatile organic compounds (SVOCs), lead, and allergens. Researcher will evaluate the impact of the LHC program on levels of SVOCs, which are often found in house dust, and compare the impact on residential behaviors and measured lead, allergen, and SVOC dust levels in homes also taking part in an enhanced version of the New York's Healthy Neighborhood Program (a low intensity healthy homes education and referral program).

Contact Person/Authorizing Official: Diane Czwakiel; czwakiel@silentspring.org

Michigan

Wayne State University will be awarded $699,171 to partner with the Michigan Department of Health and Human Services, CLEARCorps Detroit, and the Detroit Health Department to study the cost-effectiveness of protecting children from lead exposure through improved temporary emergency relocations, and new permanent voluntary relocations. The objective of this study is first to establish whether the policies are effective in reducing blood lead levels in children, and then to compare the costs of relocation to the costs of current approaches.

Contact Person/Authorizing Official: Sophia Johnson-Parks; ah7195@wayne.edu

Missouri

The University of Missouri – Kansas City (UMKC) will be awarded $699,997 to partner with The Kansas City Health Department Childhood Lead Poisoning Prevention Program and Children's Mercy Kansas City Environmental Health Program to study how different interventions have made housing lead safe and if this results in fewer lead poisoned children among those who move into a home after remediation is completed. UMKC will also develop a Housing Based Lead Risk Index to cost effectively target homes with higher interior lead dust levels. The goal is to develop a primary prevention approach based on exterior housing observations as well as neighborhood level social determinants of health.

Contact Person/Authorizing Official: Yusheng (Chris) Liu, PhD; ORS@umkc.edu

Nevada

Board of Regents, NSHE, obo University of Nevada, Las Vegas (UNLV) will be awarded $530,891 to study the knowledge gap surrounding the extent of potential hazards associated with the lead content of commercially available ceramic tile. Characterization of the potential lead hazards of ceramic tiles could inform policies and practice concerning the extent of lead dust hazards originating from tile, lead utilized in the manufacture of tile and glazes, and guidance regarding the handling, installation, and demolition of tile during home renovations.

Contact Person/Authorizing Official: Lori M. Ciccone; osp@unlv.edu

New Jersey

Rutgers, The State University of New Jersey will be awarded $641,756 to evaluate the cost-effectiveness of integrated house mouse management programs by comparing the cost and effectiveness of three different mouse treatment programs in multifamily apartment buildings, the effect of integrated house mouse control programs on mouse allergen reduction in homes, and profile house mouse ectoparasites and their potential role as disease vectors by investigating the species and infestation rates of ectoparasites on house mice found in multifamily buildings.

Contact Person/Authorizing Official: Colin Coakley; cc1609@ored.rutgers.edu

Ohio

The Ohio State University will be awarded $999,884 to develop and validate a rapid, point-of-care, smartphone-based test of house dust for semiquantitative detection of inhalant allergens which commonly cause asthma symptoms. The researchers will also demonstrate usability of the app for improved real-time hazard assessment in homes of asthmatic children. They will work with their community partner, the Asthma Express program, at Nationwide Children's Hospital Homecare. This program has direct access to the community and provides follow-up education and instruction to families of pediatric patients, who suffer from severe asthma attacks, through in-home nurse visits.

Contact Person/Authorizing Official: Carolyn Vesely; vesely.4@osu.edu

Pennsylvania

Franklin & Marshall College, partnering with the Partnership for Public Health and the City of Lancaster, will be awarded $699,139 to study the long-term effectiveness of lead hazard control activities and investigate the duration of residence in a lead remediated home on children's cognitive outcomes. The study will use the 425 homes remediated in Lancaster over the past 18 years and will perform lead hazard risk assessments to determine the differences in the risk assessment findings in relation to the type of lead hazard control work and the time since remediation.

Contact Person/Authorizing Official:
Amy Cuhel-Schuckers; Amy.Cuhel-Schuckers@fandm.edu