

Northern Kentucky Nursing Research Collaborative: Lead Exposure Control

A Collaborative Partnership of NKU School of Nursing and Health Professions and the George A. Renaker (MD) Charitable Foundation

Grant Objectives

The ultimate goal of the *Coalition for the Prevention of Treatment of Lead Poisoning in Northern Kentucky's Children (Coalition)* is to eliminate lead poisoning among children of Northern Kentucky. The objectives of the Coalition are to:

1. Form collaborative partnerships that support comprehensive, community-based, primary and secondary prevention strategies designed to reduce and ultimately eliminate the presence of lead in local areas designated as high risk for lead poisoning.
2. Increase the number of lead screenings among children who reside in areas designated as high risk for lead poisoning in Campbell and Kenton Counties.
3. Increase the number of lead screenings in Campbell and Kenton County homes that are considered to be at high risk for lead hazards.
4. Increase awareness among the public and professional community regarding the risks and hazards of lead contamination and poisoning in local areas designated as being at high risk for lead poisoning.

NKU School of Nursing & Health Professions Uniquely Poised to Effect Lead Poisoning in N. Kentucky

The faculty of NKU's School of Nursing and Health Professions seek to provide leadership for the improved health of people in the Northern Kentucky regional community through excellence in education, research, and clinical practice. In pursuit of this endeavor, nursing faculty spearheaded the development of the Northern Kentucky Nursing Research Collaborative in 2005. It secured \$46,000 in support of a two-year start-up program.

The Research Collaborative, chaired by Judi Frerick, is comprised of NKU community healthcare providers who seek to expand the impact resulting from the application of clinical nursing practice based on evidence derived from research. Current partners include St. Elizabeth Medical Center, St. Luke Hospitals, the Northern KY Independent Health Dept., and Riverhills Health Care.

Health care agencies that employ nurse researchers experience better patient outcomes, improved quality of care, and are more likely to qualify for nursing awards such as the Magnet Designation. (American Nurses Credentialing Center, 2005). The Magnet Designation, received in 2006 by St. Elizabeth Medical Center, is a coveted award held by only 150 hospitals nationwide.

The Research Collaborative introduces the research process to novice nurse researchers while providing advanced research opportunities for more experienced nurses. Structured workshops, seminars, and professional meetings focus on the utilization and application of research within our own community by registered nurses and NKU nursing faculty and students.

NKU proposes to utilize the Research Collaborative organization to expand research initiatives focused on minimizing the exposure to lead in the Northern Kentucky community. Additionally, NKU nursing faculty secured grant funds totaling \$68,000 in support of an initial lead project focused within Kenton and Campbell counties. The structure in place for this grant initiative provides an excellent foundation to launch a more proactive intervention strategy that implements lead reduction strategies in Campbell and Kenton counties.

Reducing Northern Kentucky Children's Exposure to Lead

Current efforts to reduce children's exposure to lead in Northern Kentucky are organized and implemented by the Northern Kentucky Independent Health Dept. Abiding by current federal legislation, home based interventions are focused whose blood lead levels exceed 15 ug/dL. In effect, the damage to their bodies has already occurred.

This proposal seeks to build upon NKU's School of Nursing and Health Professions' existing grant program designed to impact children who have blood lead levels < 15, those who receive only educational material from the Health Dept. The program currently in place engages NKU undergraduate nursing students in a service learning experience to test children's homes or their care giver's home for lead exposure. If lead exposure is found, parents and caregivers are encouraged to participate in an intensive educational program that instruct them on measures that can be taken to lessen their children's ingestion of the lead and steps they can take to abate the lead in the home.

In Year 1 of the proposed project, NKU will encourage registered nurses in the community, NKU master of nursing students and undergraduate nursing students to work collaboratively on research initiatives that seek to reduce the incidence of lead exposure in the Northern Kentucky community.

In Year 2, NKU nursing faculty will lead a community-based intervention that seeks to abate lead in targeted homes through the use of HEPA vacuums, painting over lead based paint to create a barrier so that lead dust cannot be spread and by providing grass barriers in yards with contaminated dirt. Through the research collaborative, the effectiveness of these strategies will be assessed.

The Northern Kentucky Nursing Research Collaborative has a unique opportunity to positively impact the poor health outcomes of children poisoned by lead. Its impact can be far reaching. Application of successful strategies to a Community Lead Exposure Control Model has the potential of statewide or nationwide adoption that could result in a revolutionary approach to remove the blight of lead from our environment and ultimately the elimination of lead poisoning in our children.