INFORMATION REPORT

TO: Mayor and Members Board of Health	**WARD(S) AFFECTED:** CITY WIDE
COMMITTEE DATE: June 18, 2012	
SUBJECT/REPORT NO: Environmental Lead Awareness Interventions - BOH11030(a) (CITY WIDE)	
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Council Direction:

At the September 2011 Board of Health meeting, members approved the following recommendation: "That Public Health Services (PHS), in collaboration with internal and external partners, develop and deliver an environmental lead awareness program that will attempt to reduce exposure to environmental lead for high-risk groups (children under age 7 and pregnant women and/or women who may become pregnant) and refer resource implications, if any, to the 2012 budget process".

Information:

This report describes a comprehensive plan to reduce lead exposure among Hamilton residents at risk, including pregnant women and children less than 7 years old. The environmental lead exposure reduction plan consists of the following three components:

- Public Education and Awareness;
- Physician Education and Awareness; and
- Enhanced Public Health Services.

Public Education and Awareness

Lead awareness advertising graphics along with education resource materials are being developed and evaluated at various locations throughout the City prior to the campaign implementation to ensure effective reach to the vulnerable and at-risk populations. Public Health Nurses working in the Family Health Division conducted pilot testing for a one week period in late May at select Ontario Early Year Centres within Hamilton. Consistent use of visuals and key messaging will be used throughout the various mass media channels to achieve campaign recognition and message recall.

A comprehensive communication campaign is most effective when it includes a combination of media, interpersonal and community events[1]. The environmental lead communication campaign that PHS is implementing is a strategic multi-layered approach that includes communication to individuals, networks and communities through mass media, interpersonal communication and events.

Mass Media

Initial communication will comprise of mass media channels including transit shelter ads, internal bus ads, printed brochures, as well as information available on the City of Hamilton website. These channels provide general awareness of potential environmental lead exposures and mitigation strategies, and inform people about where they can access additional resources. Transit shelters will be strategically located throughout the City of Hamilton with additional emphasis concentrated in at-risk areas identified as a result of the Hamilton Child Blood Lead Study. The advertisements referred to above will seek to drive members of the public to access health information about environmental lead through the City of Hamilton website (www.hamilton.ca/lead). The website will be operational on or before June 29, 2012.

Community Events

Community events reach large numbers of people and provide opportunities for participation through interpersonal communication. They complement the mass media component of the environmental lead communication campaign. PHS staff will attend community events including festivals and fairs located in areas with identified populations at risk to raise public awareness about the risks associated with environmental lead exposure. In addition, Public Health Nurses (PHNs) will incorporate the topic of environmental lead awareness into the curriculum of health information provided at drop-in sessions conducted at Ontario Early Years Centres within Hamilton.

[1] Public Health Ontario & The Health Communication Unit. Overview of Developing Health Communication Campaigns. 2009.

Physician Education and Awareness

Environmental lead awareness among family physicians will be increased by collaborating with the Hamilton Family Health Team (HFHT), the McMaster Family Health Team (MFHT) and the Hamilton Academy of Medicine to disseminate resources from PHS to assist in the care of their patients related to lead exposure. HFHT and MFHT are health care organizations that include a team of family physicians, nurse practitioners, registered nurses, social workers, dietitians, and other professionals who work together to provide health care for their community. Family Health Teams provide more service and a wide range of health options, especially for people who don't have a doctor. PHS staff that work closely with HFHT and MFHT will provide lead awareness information to the team members through internal networks, as well as workshops conducted for the members.

There are two principal messages that will be communicated to physicians. The first message is to inform physicians about the availability of a guidance document titled "*Blood Lead Levels in Hamilton Children Ages 0 to 6 years – Information for Physicians*". This document was developed in 2009 by the blood lead study research team as a resource for community physicians to use when assessing the need for blood lead testing, as well as providing information about how to interpret results to complete the clinical assessment picture. This informative resource will be made available to physicians via the PHS website. Materials will also be available for physicians to distribute to patients in their waiting rooms.

The second important message that will be communicated to physicians is that PHS staff are available to assist in case investigations of children identified as having a documented blood lead level above the Health Canada guidance value (0.48 umol/dL). More information about this is provided in the "Enhanced Public Health Services" section of this report (below).

The long-term potential for partnerships with community physicians regarding the lead intervention strategy is especially exciting when considering the proposed McMaster Downtown Medical Centre. This facility is expected to provide primary health care services to approximately 15,000 Hamilton residents, many of whom will be living in the identified areas at higher-risk of exposure to environmental lead. There is great potential for a local blood lead screening pilot project to be undertaken between PHS and primary health care providers. Such a project would serve to identify at-risk children under 7 years old that have blood lead levels at or above the national guidance value and are in need of clinical follow-up.

Enhanced Public Health Services

Public Health Nurse (PHN) Home Visits

An integral component of this campaign is the interpersonal communication with the at-risk population through the outreach programming provided by the Healthy Babies, Healthy Children program. In-home visits provided by PHNs will allow for information exchange on potential exposures to environmental lead and various mitigation strategies that can be taken to reduce risk within the home. This form of public health education is ideal in that it allows the PHN to provide information that is tailored to the family's needs directly to the care-givers of the newborn child.

Provision of Brita Water Filters NSF-53 For Lead Removal

Using a NSF-53 water filter will provide drinking water that is safe from lead contamination. During the home visits conducted by the PHNs, a risk assessment regarding lead exposure risk will be done. At that time, if lead exposure through drinking water is determined to be a potential risk due to the possibility of a lead service line, a water pitcher and replacement NSF 53 water filters will be provided to reduce the potential lead exposure of children under the age of 7. This will be done using existing resources.

Public Health Inspectors (PHIs) Trained in Lead-Based Paint Inspection

PHIs will be trained as Lead-Based Paint Risk Assessors according to the United States Environmental Protection Agency (U.S. EPA) certification standard. Some areas of focus of the certification course include the health effects of lead exposure, lead-based paint testing operations, lead exposure identification via visual examination, dust sampling for lead contamination, and soil sampling for lead contamination. Currently Canada does not regulate the inspection of home environments for risk of exposure to lead. Successful completion of this certification course will help build capacity within the Health Protection Division to conduct home risk assessments for lead exposure. If a physician has a patient that is less than 7 years of age who has a documented blood lead level that meets or exceeds the Canadian guidance value for blood lead levels (0.48 umol/dL), the physician can contact PHS to request a home environment assessment by a PHI that has been trained according to the U.S. EPA standard. This type of collaboration between PHS staff and the child's primary care physician is ideal for the follow-up required to address any environmental factors that may be contributing to the child's blood lead burden.