

INTRODUCTION

The ***Lead Awareness in Indian Country: Keeping our Children Healthy!*** Curriculum (Curriculum) is designed to be a user-friendly tool to educate tribal communities about lead exposure and promote in-home activities to reduce and/or prevent potential exposure to lead. The Curriculum identifies key information to empower individuals to act within their own homes to protect their children and communities. Several preventative actions such as effective cleaning techniques, proper handwashing and good nutrition can be taken by parents, grandparents, child care providers and others to reduce children's potential exposure to lead.

This Curriculum was developed in collaboration with tribal partners to:

- Raise awareness in tribal communities about childhood lead exposure;
- Expand understanding of lead's potential impacts on children's health and cultural practices; and
- Encourage actions that can be taken to reduce and/or prevent childhood lead exposure.

Children's exposure to lead may come from multiple sources and can cause irreversible and life-long health effects. Lead is particularly dangerous to children because their growing bodies absorb more lead than adults due to mouthing and hand-to-mouth behaviors (Ref. 1). Children's brains and nervous systems are particularly sensitive to lead's damaging effects. In fact, lead can affect other organs (e.g., kidneys) and systems (e.g., muscular) in the body (Ref. 2). No safe blood lead level in children has been identified. Even low levels of lead in children's blood can result in:

- Behavior and learning problems;
- Lower intelligence quotients (IQ);
- Increased hyperactivity;
- Slowed and stunted growth;
- Hearing problems; and
- Anemia.

At high levels, lead can cause:

- Coma;
- Seizures; and
- Death, in some cases.

During pregnancy, lead is released from the mother's bones along with calcium and can pass from the mother, exposing the fetus or breastfeeding infant to lead. This can result in serious effects to the developing fetus and infant, including

- Causing the baby to be born too early or too small;
- Hurting the baby's brain, kidneys and nervous system;
- Increasing the likelihood of learning or behavioral problems; and
- Putting the mother at risk for miscarriage.

The **Lead Awareness in Indian Country: Keeping our Children Healthy!** Curriculum is designed to balance diverse community backgrounds, technical information and localized knowledge to allow community leaders (i.e., instructors) an opportunity to plan and deliver unique messages within each structured module.

Four educational modules make up the Curriculum:

- *Module 1: Understanding Lead* - provides an overview of lead, its impacts and actions that can be taken to reduce potential lead exposures and lead poisoning;
- *Module 2: Effective Cleaning Techniques* - explains and demonstrates recommended cleaning techniques for reducing household lead dust;
- *Module 3: Personal Hygiene and Nutrition* - focuses on the connections between personal hygiene and nutrition for children and potential exposure to lead; and
- *Module 4: Hiring Lead Professionals* - emphasizes the importance of hiring a certified lead professional to follow lead-safe work practices to reduce exposure to lead.

Each module consists of materials (i.e., lesson plan, worksheet, key messages, presentation slides and kids activity sheet) to facilitate interactive sessions with participants. Instructors do not need to be experts on lead to conduct these educational sessions. The Curriculum is designed to provide community leaders a step-by-step guide through each module with outlined approaches, background information, resources and examples.

The *Using the Curriculum* section provides instructors an in-depth understanding of how to use the materials and guidance to prepare and present the information. Instructors may choose to conduct modules in a manner and pace that best works for their community, whether conducted all at once or individually over time. This Curriculum is intended to provide instructors a starting point to hold informed conversations within their communities and encourage behavioral changes to protect children from potential lead exposure.

References

1. Agency for Toxic Substances and Disease Registry. Case Studies in Environmental Medicine: Lead Toxicity. 2017. Available at <https://www.atsdr.cdc.gov/csem/csem.asp?csem=34&po=0>. [Accessed August 20, 2020].
2. U.S. Environmental Protection Agency. Protect Your Family from Lead in Your Home. 2020. Available at <https://www.epa.gov/lead/protect-your-family-lead-your-home>. [Accessed March 30, 2020].