

MPH 613 - INTEGRATED LEAD POISONING PREVENTION ASSIGNMENT

Identify and briefly explain *five* potential lead sources that could affect people's health in the mock community. Which one is likely to affect the most people? Why?

1. **Plastic carnival necklaces:** Colorful plastic beads are made with the gasoline that has Lead as an additive. As it gets distributed across the town to help foster a festive atmosphere, it creates the lead dust. Children are likely to inhale and ingest the lead dust by touching or sucking. The necklace. Hundreds of necklaces litter in the streets after the carnival causing soil to get contaminated.
2. **Face painting with tiro:** Face painting is trendy lately. Children especially enjoy having the area around the eye painted. However, they are unaware of the lead exposure. Facial paints contain lead, and by applying directly onto the face, it gets absorbed by the skin.
3. **Low cost apartments from 1940s and 1950s- & Single-family homes from 1930s:** Before 1950, lead-based paint was used on the inside and outside of most homes. House paint sold during that time had a 50% lead. Deterioration of house paint is the primary source of lead poisoning in the United States. Typically, people spend more time in their homes than in any other building and thus, the home can be a major source of exposure **which affects most people in the mock community**. Lead is particularly dangerous to young children. Most children get lead poisoning by staying in older homes that have lead paint. When old paint cracks and peel, it makes lead dust. Children get lead poisoning by swallowing the paint chips or by breathing the paint dust.
4. **Buckshot bullets:** Buckshot bullets are either 100% lead or steal.
5. **Musical Instrument Set and a set of Rubber Critter Toys:** Rubber critter toys are painted to attract with vibrant, shiny color to attract the children. A musical instrument set is made of acrylic and is painted. Children playing with rubber critter toys are unknowingly exposed to lead poisoning.

Identify and briefly discuss *three* conditions/characteristics/practices/activities in the mock community – including cultural beliefs, values and practices – that could affect people's risk of lead poisoning? How are these factors important in how a lead poisoning education program is designed?

1. Semi-annual "renovate it yourself" initiative

Renovation creates dust particles. Older homes and apartments have a higher level of lead in their painted walls. Chipping off the paint and repainting the wall can create dust clouds inside and outside the house, causing most people exposed to lead poisoning. Children are most susceptible to poisoning as their growing body absorbs more lead as compare to adults. Once absorbed into the body, lead may be stored for long periods in mineralizing tissue. The stored lead may be rereleased into the bloodstream, especially in times of calcium stress or calcium deficiency. Children tend to put their toys and hand in their mouths, and having lead contain dust around the house can severely affect the children.

2. Chapulines imported from Oaxaca, Mexico

Chapulines (grasshoppers) as a traditional snack food and are usually prepared with ingredients such as garlic, salt, lime juice, or a red chili powder coating. Grinding spices in the clay pots is a tradition of Mexican people. Pots made with contaminated soil can lead to contaminating the food. They are not widely available in the United States but can be brought by an individual from Mexico. Chapulines from Oaxaca, Mexico, showed that they might contain as much as 2,300 micrograms of lead per gram of product. A young child eating one of these highly contaminated chapulines could ingest nearly 60 times his or her tolerable daily intake for the lead.

3. Buford's Restaurant featuring fresh venison and small game from the town's own Buckshot Buddies Hunting Club

Marketing strategy of restaurant of having food and fun can lead to serious health and environmental consequences. Individuals should avoid venison meat killed with lead ammunition. Lead-based bullets fragment inside game animals, potentially contaminating much of the carcass. Consumption of lead-contaminated meat over time can cause brain damage. Especially children are vulnerable, and lead poisoning can affect their growth and cognitive development. Studies have found that when carcasses with lead fragments are cooked with acidic food, absorption of the metal lead is at the peak.

- While designing the lead poisoning education program, recognizes cultural difference, respect, and be responsive in the program design, implementation, and communication. Assumptions cannot be made on traditional approaches used by the dominant culture are universally applicable Cultural differences affect all aspects of health and health systems.

Why are cultural factors in the mock community important for effectively communicating lead poisoning information? Using what you know about this community and its situation, recommend specific risk communication strategies for reaching *three* different audiences and sectors in the mock community.

- While communicating lead poisoning information to the community, consideration of cultural factors is essential. Culture influences how people see the world, interpret information, view the credibility of sources, and respond to recommendations. Information should be delivered in appropriate cultural formats and at the reading level of the diverse community.
- Since children are susceptible to lead poisoning, age-specific specialized material should be prepared to explain the situation. Provide all information in simple language, accurate and transparent to build the trust.
- For immigrants, have information available in their language to help them understand the risk of being exposed to lead poisoning. Respect their cultural values and beliefs while communicating the potential risk. It is also important to avoid overgeneralizing, stereotyping, and other culturally-based assumptions.
- The mock community has an age group of 0-84 years old males and females. Communication should be tailored to the literacy level of the audience to be effective. Especially now, where the communication strategy is two way. Information should have visual aid and audio for the people with disability or just at the age of understanding the material.