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Practice Lab

1. Happy Town has a multitude of lead exposure areas that are of high concern. To begin, children's entertainment such as beaded necklaces, rubber critters, and Tiro eye paint could contain lead and be harmful. Since the town has such an open and welcoming demeanor, they acquire many immigrants from all over the world. Some of these residents may have cultural customs that include the use of leaded materials. The food options within the town also serves as a source for lead exposure. Chapulines imported from Oaxaca, Mexico may contain as much as 2,300 micrograms of lead, surpassing the recommended daily lead threshold for children by 60 times ("Childhood Lead Poisoning Prevention Program"). Additionally, Buford's is supplied by small game hunting and venison. If these hunters are using lead ammunition, it proves as another source of exposure. Many of the more affordable options for housing in Happy Town were built prior to the banning of lead paint and may even have lead pipes contaminating drinking water. In addition, many families renovate their own homes. This is cause for concern due to not using Lead-Safe contractors, creating dust throughout their home, exposing themselves and their families to the breakdown of lead paint. Renovation of such large numbers of older homes will affect most people in the community due to this practice being widespread and the town sponsoring this practice.
2. Immigration from other areas is a concern for lead poisoning due to cultural customs. Egyptians used lead to glaze pottery, Greeks made coins, and the Romans made pipes, dishes, cosmetics, coins, paints, and even lead pots to make wine. Because lead is not viewed as a hazard in many areas of the world, many immigrants may be unaware of lead exposure and its effects. Activities hosted by Happy Town are mostly directed at children, who are most at risk of lead poisoning with serious consequences. New Residents Day provides plastic carnival necklaces and Tiro face painting. The Happy Town Annual Fun Fair hands out musical instrument sets and rubber critter toys that are of concern. Many of these toys are manufactured with lead and harmful to children especially if toys are put in their mouths. Children absorb more lead than adults due to continuous growth. In addition to putting more objects in their mouths, they are closer to the ground to inhale lead contaminated dust and soil. It is important to be educated about prevention of lead exposure to keep children safe as their developing nervous systems are sensitive to lead. Another practice within this community that demonstrates potential for lead exposure is renovating their own homes. By doing so, they are potentially chipping lead paint off, tearing walls down, replacing window frames, all of which will create dust. The dusty-lead filled by product of these renovations can cover their homes – food, surfaces, and materials in everyday use. Culture is a widespread and important aspect to many people's lives, many of them will have different values and beliefs that cause them to perceive risk differently. An education program must be designed to respect their cultural practices but be effective in teaching safety. To be open and receptive to suggestions regarding risk, building trust is of most

importance. To gain trust, officials will need to incorporate each cultural background and expand their knowledge for each one. This will also serve as bringing empathy to the situation, which will allow the community to feel included and allowed to openly ask questions. Since much of the concern of lead exposure is directed at children, educating their parents is also an important factor in program design. Including examples of the dangers of lead exposure should be included as well as preventive measures; screening programs, keeping home dust free, washing bottles, pacifiers, and toys, and removing shoes before entering the house. Happy Town currently sponsors a semi-annual class on home renovation. This is an easy access point to ensure homeowners are aware of the concern of lead-based paint and how the destruction of can spread throughout their household and affect their families. Immigration, children, and home renovation are all activities and lifestyle choices, by including all of these aspects in an education program, everyone will receive risk communication on lead exposure.

3. It is well known that Happy Town has a diverse population of different cultures, ages, income ranges, etc. Performing a survey within the community will allow professionals to know where people are that need extra assistance, different communication styles, or more information regarding the environmental risk of lead. Surveying the community and performing focus groups will also allow an opportunity to build trust before suggesting big changes. The average household in Happy Town earns less than the median household income. This poses concern of literacy level, access to information, and likely have a higher rate of exposure. Low-income groups live in less expensive housing that could still have lead paint and pipes. These factors largely affect the children living in these areas through paint, dust, and contaminated drinking water. A parental knowledge assessment could be performed to better understand how aware parents are of lead exposure and poisoning. Many of these occupants may not be able to afford home testing or blood screening, these are resources Happy Town could work on providing. Immigrants make up another large portion of the community. They may come from areas of culture where lead may be used in many materials. Because of the usage around the world, many of these members of the community may be extremely unaware of the harmful effects of lead. Additionally, professionals will face obstacles as how information is perceived and language barriers. Immigrants may benefit from community engagement activities where officials can better explain or show them where lead hazards stem from and use of prevention techniques. It would also be wise to invest in communication techniques in different languages, using the survey to note who needs messages in their respective languages. The use of graphics would be beneficial for both low-income groups and immigrants. Happy town is also home to many retirees. In an age of digital communication, this acts as a barrier to older generations who are unfamiliar with online sources of news. In addition, older groups may have impairments with their mental ability, visual, and hearing. The best risk communication strategies for this group would be repetitive information, plain language, and give meaning to why it is important. Officials can reach retiree aged community members by newspaper, community fliers, mail notices, and even radio. Elderly may have small grandchildren or neighborhood kids around their homes, making it important to be informed about lead exposure.

References:

"Childhood Lead Poisoning Prevention Program." *LA County Department of Public Health - LEAD*, publichealth.lacounty.gov/lead/news/grasshoppers.htm#:~:text=Recent%20analysis%20of%20chapulines%20from,day%20from%20all%20food%20sources. Accessed April 19, 2021.