

Section One: Potential Lead Sources

During the New Residents Day celebration, citizens receive beaded necklaces. Lead has been used in jewelry to help brighten colors, and if sourced from an unsafe manufacture, lead could be present in the beads (California Department of Toxic Substances Control). Along with the necklaces, the Tiro eye paint used on children is concerning. Tiro paint is composed of 82.6% lead, and 10 mg of paint would deliver 8 mg of lead to a child's eyes (Centers for Disease Control and Prevention). Additionally, HappyTown prides itself over its housing options, with single-family homes from the 1930s. However, leaded paint was used then and would still be inside the homes, and renovations of historic homes increase lead exposure. The town promotes homeowners doing the renovations themselves, but they are not lead-safe certified contractors. They are not educated on the proper handling of leaded paint or materials, and improper handling is a risk. The town is also home to Buford's Restaurant, which advertises their locally sourced meat from the Buckshot Buddies Hunting Club. If the hunters are using lead ammo, this is another potential source of lead exposure. If shot with lead bullets, there could be lead fragments throughout the meat that are too small to be seen or felt while chewing (Michigan Department of Health). A fifth possible source of lead comes from the second-hand toys given to children at the Fun Fair. While lead is banned from being used in toys made in the United States, it is used in other countries. With the toys being second-hand, it will be difficult, if not impossible, to determine manufacturing locations, thus making it hard to determine if they contain lead.

Section Two: Risk of Lead Poisoning

The risk of lead poisoning is not equal for all members of the HappyTown community. Citizens financially able to renovate their historic homes, and do it themselves, are at an increased risk of lead exposure. Degrading lead paint and paint being torn apart during the renovation process is extremely dangerous. Leaded paint dust in the air will settle onto parts of the home, including children's toys. The town already hosts a semi-annual renovation class for citizens, so incorporating lead education would be seamless. Working with a lead-safe contractor must be stressed, and community members must be educated on the consequences of handling lead paint themselves. In addition to renovations, those who eat out frequently, especially at Buford's Restaurant, are at an increased risk. If the meat is hunted with lead bullets, then those who consume the food are at risk for developing lead poisoning. Individuals and families who frequent the restaurant need to be informed of the possible exposure, especially pregnant women and children under age six (Michigan Department of Health). Primary care providers can provide lead exposure education to patients and their families. Also, the hunting group supplying the meat must be educated. The hunting group may not be aware that they are potentially

endangering their community. Education is necessary, but so is a solution: providing an alternative bullet that does not affect hunting but reduces the risk of lead poisoning is crucial. By approaching them with a solution, it helps to avoid possible push-back by the group. A third activity that increases the risk of lead poisoning is the Tiro paint used on children during the New Residents Day celebration. What appears to be a fun eye painting activity is exposing children, a high-risk group, to high levels of lead. Tiro paint originates from Nigeria, so those with cultural ties to the practice may be less willing to acknowledge the risks. The children also love the Tiro eye paint, so taking away the activity would result in many unhappy children resulting in angry parents. It is important to educate families, including the children, on the health hazards the practice produces. Since the children are involved, educational materials made specifically for them to help them fully grasp the situation are essential. And similar to the hunting group, providing an alternative paint that does not contain lead will allow for the fun activity to continue with reducing the risk of lead exposure.

Section Three: Cultural Factors for Communication

Communication is an ever-changing field, and it can only be effective if it reaches every person. Lead poisoning is a health problem that affects everyone, and no one should go without information. HappyTown's age distribution has citizens within every age group and how a person accesses information depends on their age. 25% of United States adults ages 65 and older do not use the internet, so only pushing information out through social media platforms leaves them out (Perrin and Atske). Information for lead poisoning needs to be put on television, as 81% of those 65+ get their information that way (Shearer). Additionally, HappyTown's citizens come from a diverse group of races along with new immigrants. Depending on where the immigrants traveled from, English may not be their first language. To ensure that they have the same access to the information, all materials need to be published in multiple languages. A third group involved in possible lead exposure in children. Having simple graphics and materials targeting children will help them to understand the potential risks, while also giving simple tools for adults to help remember the risks. Using multiple communication strategies allows all community members access to lead poisoning information they so desperately need.

Works Cited

- California Department of Toxic Substances Control. *Lead in Jewelry*. dtsc.ca.gov/toxics-in-products/lead-in-jewelry/.
- Centers for Disease Control and Prevention. *Infant Lead Poisoning Associated with Use OF TIRO, an Eye Cosmetic from Nigeria - Boston, Massachusetts, 2011*. www.cdc.gov/mmwr/preview/mmwrhtml/mm6130a3.htm#:~:text=Quantitative%20analysis%20by%20the%20PEHSU,lead%20to%20the%20infant's%20eyelids.
- Michigan Department of Health. *Lead Bullets and Venison, Deer, Elk, and Bear*. www.michigan.gov/documents/mdch/Lead_in_Venison_for_Families_310195_7.pdf.
- Perrin, Andrew, and Sara Atske. *7% Of Americans Don't Use the Internet. Who Are They?* 3 Apr. 2021, www.pewresearch.org/fact-tank/2021/04/02/7-of-americans-dont-use-the-internet-who-are-they/.
- Shearer, Elisa. *Social Media Outpaces Print Newspapers in the U.S. as a News Source*. 27 Aug. 2020, www.pewresearch.org/fact-tank/2018/12/10/social-media-outpaces-print-newspapers-in-the-u-s-as-a-news-source/.