

Poison Control Awareness among Refugees and Immigrants

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Introduction

Poison Control Awareness among Refugees and Immigrants in Syracuse, New
York

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Description of selected competencies

C1: Apply epidemiological methods to various settings and situations in public health practice. Whether addressing acute poisoning in a population or long-term health burdens among refugees, epidemiological methods ensure that interventions are data-driven and equitable, achieved through surveillance and data collection.

C7: Assess population needs, assets, and capacities that affect community health and assist in providing culturally appropriate care. This includes the demand for services that are sensitive to language, religion, and cultural norms.

C18: Select communication strategies for different audiences and sectors. These competencies are vital in both poison control and refugee communities, as effective communications, such as translating educational materials into short videos for individuals who may not read or write in their languages, can save lives, increase engagement, and improve public health outcomes.

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C19: Communicate audience-appropriate public health content, both in writing and through oral presentations. Like C18, different groups require tailored messages and delivery methods. For instance, health messages must be culturally and linguistically relevant to build trust and avoid misinformation.

Abstract

This paper aims to raise awareness about poison control and prevention, particularly regarding lead poisoning and other common household chemicals, among refugees and immigrants in Syracuse, New York. The paper will investigate the effective outcomes of data related to poison control and prevention awareness among refugees and migrants. It also highlights the two main types of research (quantitative and qualitative methods) utilized, as well as the theoretical framework employed in this study. The goals and objectives of this paper will be discussed, including a SMART objective. Additionally, this paper will emphasize four public health competencies relevant to poison control and prevention. The paper will also include relevant statistics, literature review recommendations, and dissemination of this program information.

General introduction and description of the public health topic

Raising awareness about poison control, particularly lead poisoning and other common household chemicals, among refugees and immigrants in Syracuse, New York, is vital for ensuring their safety. This is especially important considering the unique challenges they face related to unfamiliar environments, language barriers, and illiteracy, either in English or their native languages, which could increase their potential exposure to harmful substances. For instance, for refugee, immigrant, and migrant (RIM) communities, the lack of translated resources for how to use over-the-counter (OTC) medicines, including potential drug interactions, can present a significant safety risk (University of Minnesota, 2025). Therefore, I

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have collaborated with the New York State Poison Control Center to create educational materials that have been translated into short videos in various languages representing different refugee and immigrant communities in Syracuse and New York State.

Program Overview

The goal for the project is to create awareness that will improve the understanding of poison control services among refugee and immigrant communities, ensuring they can recognize poisoning risks, identify poison, and increase access to appropriate emergency assistance.

Objective

- Developing a Community Education Program: Creating educational materials aimed at churches and community centers.
- Collaborating with healthcare providers in Upstate New York will raise awareness about poison prevention, help recognize poisoning symptoms, and inform when to call for assistance.
- Engaging with the Upstate New York Poison Control Center would enhance public safety among refugees and migrant populations and promote a collaborative approach to health education and poison prevention within the community.

SMART Objective:

Specific: Educate refugee and immigrant families in Syracuse and around Upstate New York about poison prevention and how to contact the poison control center in case of an emergency.

Measurable: Aimed to reach at least 1,000 individuals through culturally and linguistically appropriate church meetings, workshops, and distribute 5,000 educational materials (flyers, videos, posters).

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Achievable: I have partnered with three local community organizations: the Catholic charity, Rise New York, the Interfaith Work of Central New York, and the Poison Control Center's translation services to deliver the program effectively.

Relevant: Refugees and immigrants often face language and system navigation barriers, putting them at higher risk of missing out on essential public services, like poison control services, or even at risk of unintentional poisonings from day-to-day household cleaning chemicals or medicines.

Time-bound: Complete outreach and education efforts within 4 months.

Implementation Setting

This program will be implemented through collaboration between the Poison Control Center and a non-profit organization in Upstate New York, like the Catholic charity, Rise New York, the Interfaith Work of Central New York, and local Schools. The plan is to use brochures, flyers, videos, posters, Webinars, and in-person workshops to spread poison awareness among refugees and Immigrants/migrants.

Literature Review

The crucial need for poison control awareness is shown in this article by the University of Minnesota, published this year. In their study, effective communication is crucial in healthcare settings, particularly for Refugees, Immigrants, Migrants (RIM) communities who may face language barriers. In their study, they found that limited English proficiency can lead to misunderstandings, medication errors, and adverse health outcomes. Providing translated materials and interpretation services is essential to ensure that non-English-speaking patients receive accurate information and appropriate care, which are some of the services the Poison Control Center provides.

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Spreading the news about poison awareness is essential. For example, in this Study by the CDC, refugee and immigrant children exhibit higher rates of blood lead levels (BLLs) compared to the general U.S. population. “Lead poisoning disproportionately impacts refugee and immigrant children resettled in the United States.” (CDC., 2025). For instance, from 2010 to 2014, this study found that 19.3% of refugee children had extreme blood lead levels (EBLLs) upon initial testing, with the prevalence increasing to 22.7% during follow-up screenings.

Also, in this 2023 article by the CDC, they emphasize the need for healthcare professionals to engage Refugees and Immigrants with clear, culturally sensitive, and linguistically appropriate methods. The CDC highlights that individuals may have varied experiences with healthcare systems, influenced by factors such as immigration status, prior exposure to violence, and potential distrust stemming from historical injustices. To foster effective communication and build trust, healthcare providers are encouraged to understand, respect, build trust, and ensure safety for refugees and migrants. From the article, this is because Refugee, immigrant, and migrant communities, also known as RIM communities, are a heterogeneous segment of the population representing many cultures, languages, regions of the world, immigration statuses, and motivations for migration to the United States (CDC, 2023).

In addition to that, LuPone et al. (2020) claimed that refugee children have a higher prevalence of elevated BLLs compared to U.S.-born children. Using a study across multiple states, they found 19.3% of refugee children had BLLs at or above 5 µg/dL upon initial screening. Factors such as younger age and country of origin were associated with higher BLLs. Furthermore, their study found that Refugee children are at risk of lead poisoning post-resettlement due to urban housing and environmental inequalities stemming from a lack of funding, legislation, and advocacy. (LuPone et al. 2020).

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Another article that supports this project is the article by Lau et al. (2021). In it, Cultural competence is recognized as essential for providing effective and equitable services to refugees and asylum seekers. However, the delivery of culturally appropriate services-including health care and social services, is often complicated by unclear definitions and operationalization of cultural competence. (Lau et al., 2021). Their study underscores the need for a more nuanced understanding of cultural competence that goes beyond surface-level cultural awareness to address deeper structural and systemic issues, but still very cultural awareness enhances a better understanding of the community, hence a better approach and a better culturally sensitive education material.

Moreover, the need for poison control awareness is further supported by Pezzi et al. (2019). They claimed that refugee children often exhibit higher BLLs than the general U.S. pediatric population due to pre- and post-resettlement exposures. In their study, they found that in Massachusetts, 16% of newly arrived refugee children had elevated BLLs, with a significantly higher risk of increases post-arrival compared to local children. They also concluded that effective identification of incoming refugee populations at high risk for EBLL can inform prevention efforts both domestically and overseas. (Pezzi et al., 2019). Making poison control awareness very crucial.

Relevant statistics

According to the CDC, approximately 20% of the U.S. population speaks a language other than English at home and may prefer to use a language other than English during healthcare encounters. Furthermore, 83% of the foreign-born population in the United States who are 5 years of age and older speak a language other than English at home, with 46% having limited English proficiency. This indicates that language access is even more crucial for this

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group. Moreover, the CDC states that lead poisoning disproportionately impacts refugee and newcomer children resettled in the United States. Lead is a significant natural toxin found in the environment and many household materials, posing numerous health risks for children.

According to a study by LuPone et al. (2020), among refugees in Syracuse, New York, 17% of newly arrived children had elevated blood lead levels (BLLs) ($\geq 5 \mu\text{g/dL}$); 10% had elevated BLLs upon follow-up; and 8.3% of the follow-up high BLLs were attributed to new exposures. Additionally, 30% were found to have increased blood lead levels (BLLs) at follow-up, regardless of their arrival status.

Description of the target population

The target population consists of refugees and immigrants in Syracuse, New York. This city has welcomed over 7,000 individuals in the past decade, with an expected intake of about 1,000 more each year.

Theoretical framework

- Poison control awareness was developed using the Health Belief Model.
- With the Health Belief Model, health educators and public health officials can create targeted and effective poison control awareness campaigns aimed at addressing vulnerability and severity, highlighting benefits and overcoming barriers, and promoting cues to action while building self-efficacy.

Methods

Poison control awareness will be evaluated using a pre-post-education survey. Focus groups will be conducted through community outreach in gathering places such as churches and

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schools to collect in-depth insights from the community regarding their knowledge, attitudes, and practices related to poison control.

Results

Raising awareness about poison control, particularly lead poisoning and exposure to common household chemicals, among refugees and immigrants in Syracuse, New York, is vital for ensuring their health and safety. Poison control awareness increases and improves early detection and prevention of lead poisoning, especially in children, which can prevent developmental delays, learning difficulties, and long-term neurological damage due to timely care and management. Moreover, not only could poison control and prevention awareness improve the outcome, but it can also decrease incidents of accidental poisoning from household cleaners, medications, or pesticides due to better education on storage and usage.

Discussion

From Arnold et al. (2025), the objective of poison centers is to reduce morbidity and mortality associated with poisoning. Arnold et al (2025) continue to describe that Poisons can include exposures to medications, supplements, illicit drugs, household, and industrial chemicals, environmental toxins, plants, and venomous insects and animals. Therefore, targeted poison control education among refugees and immigrants, like what we did here at Upstate Poison Control Center here in Syracuse, New York, could lead to a healthier, safer, and more informed community, reducing preventable harm and improving quality of life of refugees and migrants here in Syracuse and entire United States of America.

Recommendations: Strong collaborative efforts between refugee resettlement agencies, local health departments (Onondaga County Health Department), Poison Control Center, and nonprofits (like Interfaith of Central New York and Rise organization) to foster sustainable health

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education systems. Cooperation between community health workers with peer educators from within the immigrant communities acting as trusted messengers or interpreters.

Dissemination of these findings to community stakeholders will be mostly through flyers/brochures, phone calls, and in-person announcements in churches and other places of worship, and schools. Nevertheless, community workshops or home visits help build trust with health professionals and reinforce safe behaviors.

Conclusion: Raising awareness about poison control, particularly lead poisoning and other common household chemicals, among refugees and immigrants in Syracuse, New York, is vital for ensuring their safety. This is because many refugees and immigrants in Syracuse reside in older housing, which may contain lead paint or pipes, and some have no access to poison control information or knowledge of household chemicals that could potentially pose hazards not only to children but also to adults. Therefore, poison control is very important, especially considering the unique challenges refugees and migrants face related to unfamiliar environments, language barriers, and illiteracy, either in English or their native languages, which could increase their potential exposure to harmful substances

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