DEPARTMENT OF HEALTH

Toxic Free Kids Program

NEEDS ASSESSMENT REPORT

07/24/2024

Toxic Free Kids Program Needs Assessment Report

Report prepared by Nini Mentan

Minnesota Department of Health
Environmental Surveillance and Assessment (ESA) Section
651-201-4899
health.risk@state.mn.us
www.health.state.mn.us

To obtain this information in a different format, call: 651-201-4899.

CONTENTS

Executive Summary 1

Introduction 2

Methodology 2

Results 3

- Demographics 3
- Content Analysis 3
- Thematic Analysis 5

Conclusion 10

Program recommendations 11

References 11

Appendix A 12

Appendix B 14

- Table 1: Needs Assessment Coding Manual 14

Executive Summary

The Toxic Free Kids (TFK) program conducted twelve key informant interviews to determine community needs and priorities in relation to programmatic activities. These interviews were done to identify knowledge and attitudes of key stakeholders regarding the implementation of the Toxic Free Kids program.

The aim of this needs assessment was to identify areas of need and prioritization for the Toxic Free Kids program. The goal and objectives are listed as follows.

Goal: To examine knowledge and attitudes about the Toxic Free Kids program and chemical exposures via consumer products.

Objective 1: To identify gaps between communication about the Toxic Free Kids program and stakeholders or interested parties.

Objective 2: To assess the reach of current communication efforts with key stakeholders or interested parties.

Objective 3: To determine communication best practices that can be used effectively by key stakeholders or interested parties.

With these goal and objectives, we examined participants' knowledge and attitudes about the TFK program. Additionally, awareness about chemical exposures in consumer products was also assessed. Participants were also asked about how they accessed health information as well as about any barriers and challenges they encountered in accessing that information. This approach is helpful in delineating what participants know about our program, their perception of the program, what their concerns are, and their risk perception and awareness about chemical exposures. It also enables us to identify appropriate methods of communicating with stakeholders who are connected to community members.

Data from the needs assessment showed a lack of knowledge about chemical exposures in consumer products and the TFK program. Results also indicated a perceived lack of concern about this topic. However, barriers to accessing information could be a key factor that influenced knowledge and attitudes.

The following themes were identified from our data:

1. Education on and awareness of chemical exposures from consumer products.
2. Prioritizing populations that are most at risk.
3. Partnerships with trusted messengers.
4. Addressing language and communication barriers.
5. Training and education for health care providers.
6. Use of digital media and media outlets as a key tool to raise awareness.
7. State engagement with local public health.
8. Community concerns about chemical exposures.
9. Advocacy for affected communities.

Introduction

Potentially hazardous chemicals in consumer products are concerning because of their ability to reach a large population in a short time frame, frequent contact with consumers, difficulty in regulating the use of these chemicals, and variation in health risks depending on chemical exposures (Li & Suh, 2019).

Humans exposed to hazardous chemicals in consumer products can potentially have negative health consequences, depending on type of chemical, method of exposure, dose amount, and length of exposure. Typically, pregnant people and children are most vulnerable and susceptible to chemical exposures and adverse health effects. Children's bodies are still developing, and pregnant people's bodies can absorb some chemicals faster than non-pregnant people. The TFK program works to identify and communicate the potential for hazardous exposures and adverse health risks. The program began in 2009 after the Minnesota Legislature passed the Toxic Free Kids Act (Bell, 2022).

Since its inception, the TFK program has focused on creating and maintaining a list of Priority Chemicals (currently nine chemicals) and a list of Chemicals of High Concern that has over 1,700 chemicals. From 2016 to 2020 there was also an increase in developing partnerships, education, and outreach to share information on the health effects of the Priority Chemicals. Through these partnerships and efforts, the program began to build relationships with community leaders, academia, and health care providers (Bell, 2022).

During the COVID years (2020-2022), partnerships and outreach related to the TFK program diminished; however, in 2023/2024, to rekindle the outreach components of the program, this needs assessment was conducted to determine community priorities/needs and how best to address them. The assessment's findings provide relevant information that can improve program activities and address unmet needs and concerns identified by key stakeholders and community members. The information obtained from this needs assessment will inform future programmatic activities.

Methodology

Between January 2024 and February 2024, 12 semi-structured in-depth interviews were conducted to assess knowledge and attitudes about the TFK program and chemical exposure in consumer products. This was a cross-sectional examination of what is known and perceived about chemical exposures in consumer products and the TFK program. Participants were recruited by networking and through emails to community-based organizations, hospitals/clinics, and various listservs. All interviews were conducted virtually, and audio transcribed. Interviews ranged in length from 20 to 60 minutes. Recruited participants identified as health care providers, community leaders, education specialists, and public health professionals. There were 12 participants in total who answered eight closed-ended and 17 open-ended questions.

Data Analysis

For data analyses, both content and thematic analyses were performed. This involved the use of pre-defined codes (from a coding manual) used to analyze individual quotes in the transcripts. Table 1 in Appendix B provides details about codes and code definition. Themes were identified in the transcripts through an inductive process without using qualitative

analysis software. Once themes were identified, quotes that aligned with the themes were selected. Coding was conducted by one staff member with expertise in qualitative research.

Results

Demographics

A total of 12 key informant interviews were conducted with participants from diverse backgrounds and professional occupations. More than half of the participants identified as white, females and ages 35-44, respectively. Two-thirds of the participants were health care providers, and the rest worked in community-based settings. Participants worked in Clay County and the seven-county metropolitan area, mostly in Hennepin County

Content Analysis

Content analysis was conducted to evaluate knowledge, attitudes, barriers, and assets. One evaluator reviewed the 12 interviews and conducted qualitative analysis, using the coding table that can be found in Appendix B. The coding represents the following four categories: knowledge, attitude, assets, and barriers.

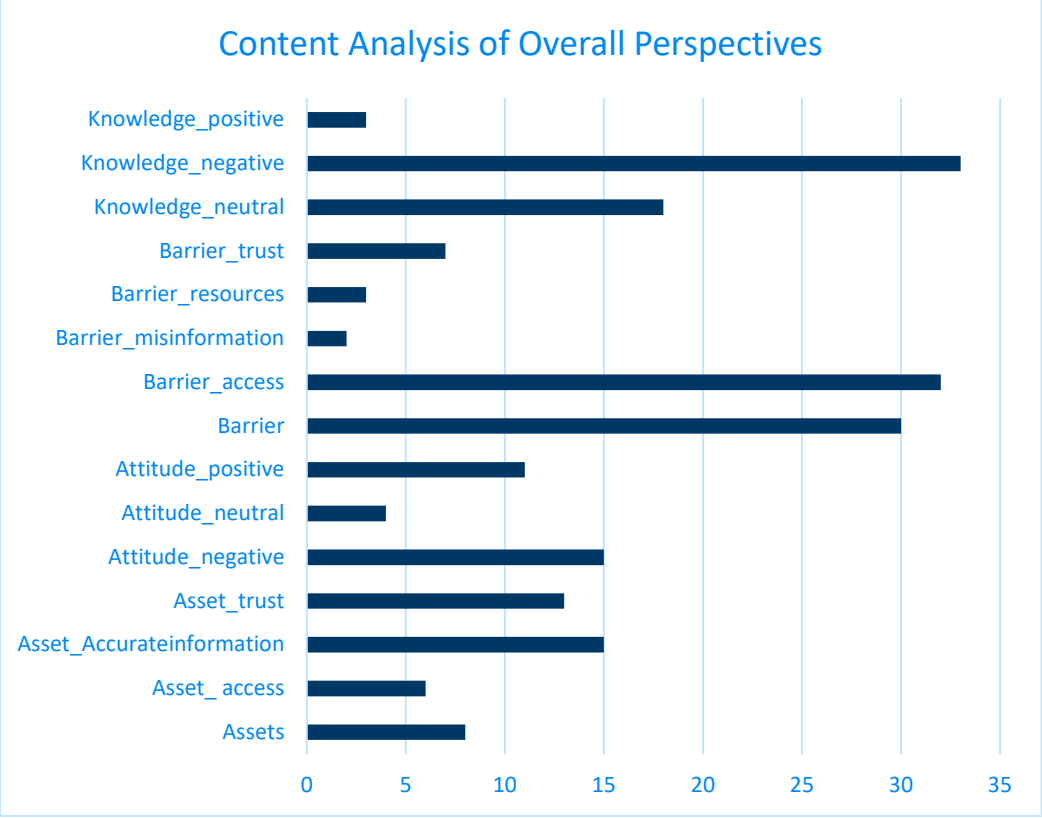

Figure 1: Number of times a code was identified in data analysis.

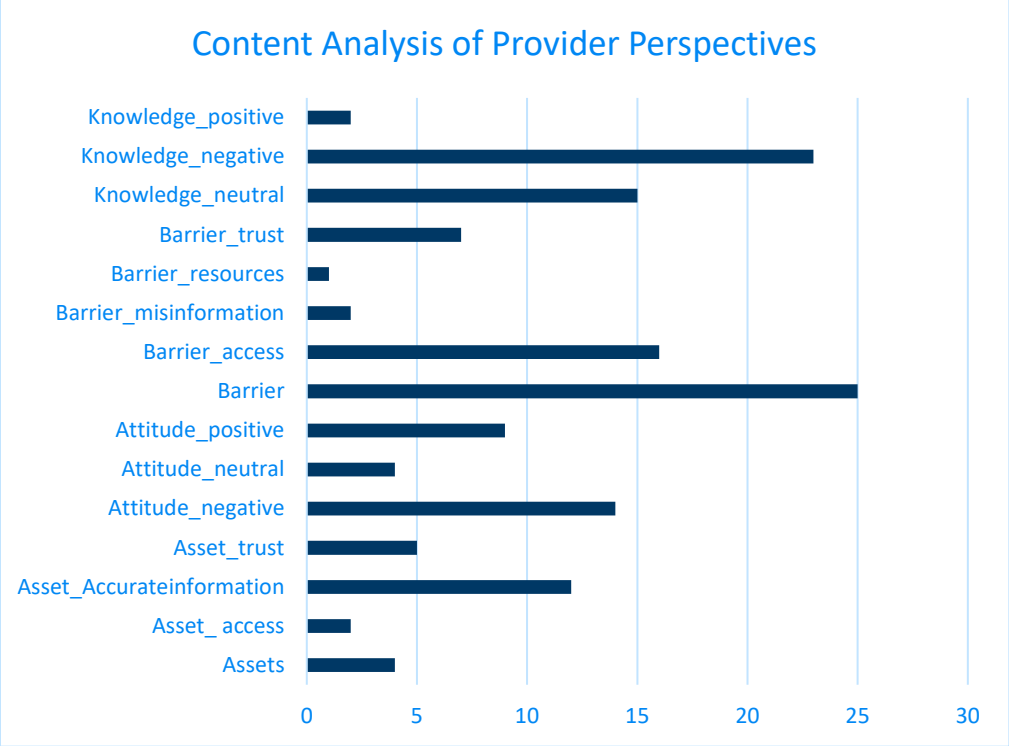

Figure 2: Content analysis of provider perspectives

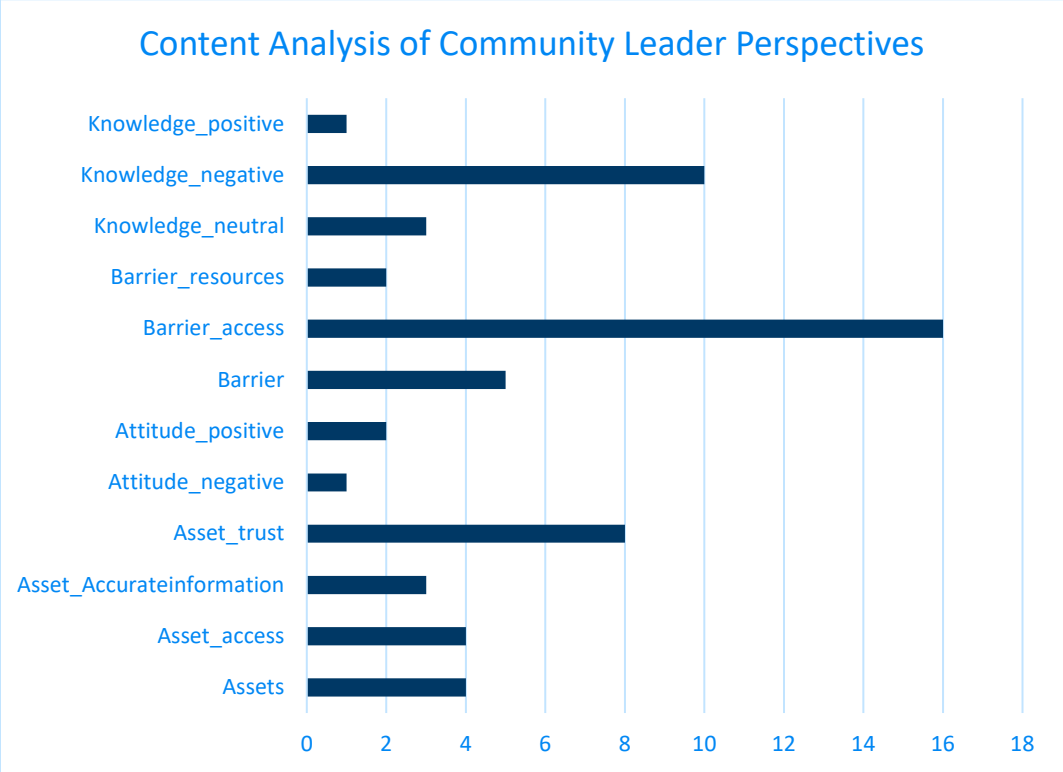

Figure 3: Content analysis of perspectives of community leaders

1. **Knowledge**

Content analysis indicated a lack of knowledge of chemical exposures in consumer products and the TFK program (Figure 1). This was demonstrated through participant responses of not being aware or having limited knowledge of the program. It is noteworthy that participants were aware of lead exposures and the lead program at the Minnesota Department of Health. Lead is a priority chemical of the TFK program. Findings were also disaggregated by health care providers and community leaders (Figures 2 and 3). Lack of knowledge about chemical exposures and the TFK program were coded more frequently among interviews with health care providers, but there was a lack of knowledge among community leaders as well. Results suggest that more education and awareness efforts are needed on all the Priority Chemicals examined by the TFK program.

2. **Attitude**

Key informants also indicated community members had a perceived lack of concern about chemical exposures in consumer products. This lack of concern may have been affected by competing household priorities that may have impacted community member prioritization of this topic. Key informants noted that some of the community members they worked with were from low-income households and needed to focus their attention on taking care of their families. Therefore, they did not have the capacity to address exposures in their home environments. In comparing health care providers and community leaders, there were differences in perception about chemical exposures in consumer products with community leaders having a more positive than negative attitude. In contrast, health care providers had more negative attitudes than positive ones. This indicates that community leaders felt community members were concerned about this topic as compared to health providers who felt this was not a major concern for them.

3. **Assets**

Community assets included having access to information from accurate and trusted health sources. Examples of accurate health sources used by health care providers include federal and state government websites. Other community assets identified were the trusting relationship built within community networks and health systems and the positive relationships community-based organizations have with community members. Assets related to community trust were important for community leaders, and having accurate information was an important asset for health care providers. This indicates the importance of building trust with community members and providing accurate information to health care providers in efforts to educate families about chemical exposures and the TFK program.

4. **Barriers**

Barriers to accessing information was a key challenge identified for community members. Examples included language barriers, lack of financial resources for internet access and lack of trust in government agency websites.

Thematic Analysis

*Some of the quotes in this section were edited for clarity.

1. **Education about chemical exposures in consumer products.**

   Key informants indicated that there was a lack of knowledge about chemical exposures from consumer products. One of the key informants said, *"I think that message has kind of been*

delivered, but people may not understand how it applies to products that we are buying or applying to our bodies. I would say there is much less awareness and knowledge in that space."

Others noted that education could focus on specific programs and topic areas, such as lead exposure.

One participant suggested a need for *"more education that could happen about lead exposure and what can be done about it."*

Another participant suggested targeting *"educational efforts at places like preschool programs or where there's a lot of parents of young children."*

Others recommended that considerations be given to literacy and availability of different languages. One person suggested:

"Making sure that the handouts or any resources, whether that's social media or web pages, are in multiple languages so that people can understand them and that they are at a literacy level that folks are able to read and understand."

The information provided about education on chemical exposures in consumer products is critical to this program. Since a part of the TFK program is focused on education and outreach, it is necessary to incorporate the recommendations of targeted outreach efforts, health literacy, and language considerations. By incorporating these recommendations, the program is using stakeholder knowledge to improve programming and outreach efforts.

2. Prioritizing populations that are most at risk.

Participants had various recommendations for which populations to prioritize. The majority recommended prioritizing low-income communities, new immigrants and refugees, communities of color, and non-English speaking communities. One of the key informants said, *"Immigrant and refugee families may have been used to very different set ups with water sources and toxin safety. Things like lead screening or being aware of chemicals in everyday products may not be as familiar for them."*

In terms of income disparities and addressing chemical exposures in consumer products, another key informant said, *"Families who face more financial stressors may have less control over their lived-in environment. If they're renting a home, for example, they may not have as much ability to mitigate lead exposure."*

Another participant said, *"My lower income families are higher risk, because they are trying to stretch a budget and provide what their kid needs, and so they're looking for things that are more affordable, and sometimes cheaper items are lower quality."*

New immigrants and refugees were another group that needs to be prioritized because of limited awareness about chemical exposures in consumer products.

One participant said*: "A lot of families coming from other countries aren't aware of lead, and when we discuss that in our visit, that's a very new thing that they're hearing about, and we have to educate them about why we test for it."*

Another participant stated that sometimes the exposures can come from products they brought with them from their home country. *"With a lot of products that they use, especially from their home country, they don't know that there are chemicals in there that could be harmful to themselves and their kids."*

Regarding the prioritization of non-English speakers, one participant said: *"The ones that don't read English or understand English, they have a harder time understanding how to protect their child from these chemical exposures, especially lead."*

Communities of color were also identified as a priority because of the marginalization and disproportionate environmental justice issues they face.

These groups identified as higher risk are important groups to be prioritized by the TFK program for education and outreach. By prioritizing these groups, the program will be able to address unmet needs and ensure that communities are receiving information and resources to reduce their exposures to hazardous chemicals and potentially improve health outcomes through risk reduction.

3. Partnerships with trusted messengers and organizations.

Key informants also highlighted the importance of trust and working with trusted messengers in the community. Trusted messengers were identified as health care providers and community-based organizations.

Health care providers were identified as trusted messengers that could relay health messaging to communities. A key informant stated, *"Some people are more likely to trust a doctor that they have a relationship with, but when they only have five minutes with a client, how are they going to fit this in with all their other stuff?"*

Another person said: *"What providers say, what doctors say, what nurse practitioners say in clinic visits has weight with families."*

Participants also noted the importance of partnerships with community-based organizations.

"It would also be good to go through community organizations working with the various populations. Spanish-speaking community organizations, Somali-speaking community organizations, all of those can be helpful."

Since these community-based organizations already have pre-established relationships and trust with community, it is easier to share information through them. As one person said, *"It's always good to send information out to people in the community that can spread it to their community."*

Partnerships with trusted messengers are needed for the TFK program as they can better convey key messages to certain audiences. Using trusted messengers to deliver TFK information will help ensure that the information is understood and acted upon.

4. Addressing language and communication barriers.

Some participants also indicated the difficulty in accessing information in different languages and conveying that information in a manner that is understandable for different audiences. Here are some of their quotes:

"My own lack of language ability outside of English is a barrier to finding quality information for my non-English speaking patients."

"For the communities that I work with in Ramsey County, language is a barrier, because there's some words that don't even have a translation."

"Because of the language barrier, they don't know how to read the product label or don't have understanding of what toys are made of or what the house is made of or the effect of living in that location."

Health literacy and language barriers were key areas that stakeholders recommended as areas of prioritization. *"The main challenge is how the message is delivered," one person said, "because it needs to fit culturally and linguistically."*

People also suggested providing information in languages commonly spoken in Minnesota, including Somali, Spanish and Karen.

Through addressing language barriers and literacy level concerns, the TFK program will help ensure that it is providing equitable access to information.

5. **Training and education for health care providers.**

Training and education for health professionals was a need frequently emphasized by health care providers. This need was highlighted because they have access to populations of interests and can convey messaging if provided with the tools and information.

A key informant noted that, *"A lot of the time I would hear from these organizations, like primary care doctors, unless the child's doctor is talking about it with the family, they're probably not gonna necessarily latch on to something. Umm, so it might be good to involve some of the medical community in that, especially the clinics that frequently see some of the populations that are most at risk."*

Another also said, *"As providers, we would benefit from more education about the biggest toxic exposures and risks facing our families and our communities."*

Participants also suggested various ways to disseminate training and information, such as these:

"As physicians, being aware of what's out there, whether it's an email blast from MDH or just having somebody come speak to our residents."

"Reaching patients through social media can certainly be effective."

6. **Use of digital media and media outlets as key tools to raise awareness.**

Media outlets and digital spaces were noted as key methods of reaching community members. Participants often suggested using social media campaigns and cultural media outlets to reach and engage with key audiences.

One participant cited cultural media as a way of reaching audiences: *"Another way to engage with the East African Somali communities is through media, especially Somali TV."*

Key informants highlighted social media and media campaigns as effective methods of reaching audiences to raise awareness about chemical exposures.

"Many people like to get their information through social media or short videos or Instagram or TikTok or something like that."

"Having an Instagram or Tik Tok channel that put out information periodically – about things to think about when you're buying products or thinking about the water that your baby drinks or those kinds of things – would help them keep their kids healthy and safe."

7. State engagement with local public health.

Key informants noted the importance of state and local public health department engagement. Some of the participants indicated that local public health professionals already had established relationships with community members, community-based organizations, and health care providers.

Some participants noted that they were already using local public health resources to support community members. For example:

"I utilize county health departments all the time, especially when it comes to managing our kids with elevated lead levels."

"Many of these professionals are already very embedded in the community and, in some cases, even in people's homes."

Other key informants indicated the importance of increasing education and awareness among local public health staff.

One said, "We should make our local public health professionals aware of this concern to incorporate some of that information into the messaging that we do already with families."

Another recommended "increasing community knowledge [by increasing the knowledge of] public health nurses, social workers, community health workers, all of the people who are providing the wrap-around support."

Partnerships with local public health and the state were indicated as an important approach to reaching the community and addressing their needs. Even community leaders and health care providers cited partnerships with local public health as being effective in educating the public and addressing concerns around exposures to metals such as lead.

8. Community concerns about chemical exposures.

Participants indicated concerns from community members about chemical exposures, especially lead exposure.

One said, "Lead exposure is a consistent concern that I think people are aware of, partly because we do these screenings."

Lead exposure was deemed to be a major concern because of community experience with early childhood screening and family home visiting programs for lead exposure. Occupational exposures from use of cleaning products were other areas of concern from families.

9. **Advocacy for affected communities.**

   Participants indicated a need for policy advocacy and regulation. A key informant noted, *"It's important that you start with the legislators and see if the legislators can impact the businesses that might be using those toxins."*

   Other suggestions focused on "monitoring the potential exposure" and "regulation around product development and making sure that products are safe."

   Advocacy and policy changes were seen as appropriate methods of improving health outcomes and reducing chemical exposures. Participants recommended that policy changes be made to regulate chemicals used in products to ensure that they are safe. This highlights an area where the TFK program can also focus its education and outreach efforts. By educating the public on current rules and statutes around product development and safety, the program can increase public knowledge and access to information about this topic.

Conclusion

In conclusion, this needs assessment provided insights into perspectives on chemical exposures in consumer products and how to improve programmatic activities to ensure that the needs of the public are being met. This needs assessment also provided an opportunity to listen to and learn from key stakeholders.

Lessons learned include the need for increased awareness about the TFK program, the importance of addressing barriers, identification of trusted messengers in communities, training and education, the use of diverse platforms to reach audiences of interests, and the importance of state and local public health partnerships.

Increasing education and awareness about the TFK program is important, because it will improve community understanding about chemical exposures to hazardous chemicals in consumer products. Through education and awareness efforts, the TFK program can potentially improve outcomes related to exposures and health risks. It can empower individuals to make informed decisions about products that they use in their household.

The barriers that influence access to health information need to be addressed, because they are preventing people from obtaining necessary information to reduce chemical exposures and improve their health. Additionally, these barriers promote inequities that can exacerbate disparities in health exposures and poor health outcomes.

The identification of trusted messengers is important because they already have trusting relationships with community members and are well known by communities. By partnering with trusted messengers, the TFK program can ensure that their messaging is appropriately shared by persons who are known to and trusted by community members.

Training and education are another method that is useful for information dissemination. Through knowledge sharing, providers can feel empowered to discuss chemical exposures with their patients. This is helpful in furthering education and outreach efforts and can potentially mitigate exposures and reduce risks of adverse health effects.

Using diverse platforms to engage audiences, such as social media and cultural media outlets, is another important lesson learned. By using these platforms, the program can reach and disseminate information to diverse audiences. Similarly, it addresses health equity concerns by

helping to ensure that some of the populations that are typically not reached receive necessary information about potentially harmful chemicals.

State and local partnerships are another important component that should be considered. By creating and strengthening these partnerships, the program can increase its reach to a variety of different audiences. It can also help with information dissemination, because a lot of the local public health programs are well embedded in communities and have existing relationships with community members.

Program recommendations

- **Provide additional education and outreach about the TFK program.** Participants are familiar with lead outreach efforts but were not aware of other aspects of the TFK program. Increased education and outreach will be helpful in raising awareness about the program and activities being implemented.
- **Strengthen partnerships with local public health agencies.**

  State and local partnerships need to be strengthened to ensure that messaging for the TFK program reaches the target audiences. Strengthening these relationships also helps to ensure that state and local public health agencies can work collaboratively to support communities, particularly those at high risk of exposure to toxic chemicals in consumer products.
- **Provide training and education for health care providers.**

  Since health care providers are trusted messengers, they can convey messages to community members. Through training and education, providers can feel empowered to discuss chemical exposures from consumer products in a manner that is clearly understood for their patients.

References

Bell, D (2022). Minnesota Toxic Free Kids Program – 2022 CHEMICALS OF HIGH CONCERN LIST UPDATE. https://www.health.state.mn.us/communities/environment/childenvhealth/docs/report2022.pdf.

Li, D., & Suh, S. (2019). Health risks of chemicals in consumer products: A review. Environment international, 123, 580-587.

Appendix A

Key Informant Interview Guide

The purpose of this interview is to identify community needs and priorities regarding chemical exposures to pregnant people, people who are thinking of becoming pregnant, and children. The information identified from this interview will inform programmatic changes to ensure children in Minnesota and their families are receiving the information they need. Feel free to skip questions you do not feel comfortable answering.

Demographic Questions.

1 Are you Hispanic, Latino, or Spanish?

a. Yes
b. No
c. Unknown
d. No Response/Prefer not to say

2 How do you describe yourself? (Mark all that Apply)

a. American Indian or Alaska Native,
b. Asian or Asian American
c. Black, African, or African American,
d. Native Hawaiian or Pacific Islander,
e. White
f. Race Not Listed Above (please specify), please specify:
g. Unknown

1. No Response/Prefer not to say

3 What was your sex assigned at birth?

a. Male
b. Female
c. Intersex
d. Sex Not Listed Above (please specify)
e. No Response/Prefer not to say

4 How do you describe your gender today? (Mark all that Apply)

a. Male
b. Female
c. Transgender man
d. Transgender woman
e. Genderqueer/Gender non-conforming
f. Non-binary
g. Two-spirit (American Indian-Specific Gender)
h. Gender Not Listed Above (please specify)
i. Unknown
j. No Response/Prefer not to say

5 What county do you work in?

6 What age group do you identify as?

a) 18-24
b) 25-34
c) 35-44
d) 45-54
e) 55-64
f) 65+

7 What communities (ex. racial/ethnic, LGBTQIA, persons with disabilities) are you a part of and identify with?

8 What is your occupation?

a) Health Provider

b) Community leader

c) Health Professional

d) Other please specify

I. Specific Questions about Children's Exposures and the TFK program:

1. Can you tell me more about your organization?
    a. What communities do you serve?
    b. What services are provided?
2. What, if anything, have you heard about the children's exposure to chemicals? Specifically, the TFK Act/Program?
3. From your perspective, what do parents/caregivers know about chemical exposure?
4. Are there differences in understanding between different groups of parent's/caregivers?
5. From your perspective, what are community concerns around chemical exposures from children's products?
6. From your perspective, are there specific needs that should be addressed to reduce children's chemical exposures from products?
7. From the communities you work with, who are the communities (ex. racial/ethnic, LGBTQIA+, persons with disabilities) that are most at risk of chemical exposures in children's products? Why?
8. Are you aware of any existing organizations that are working to reduce these exposures?
9. How do you think the health information (Ex factsheet, webpage, social media posts) provided by the TFK program can be used by communities you work with?
10. What resources are needed to spread awareness to parents/caregivers and community members regarding the TFK program and chemical exposures?
11. From your perspective, what are the areas of need the TFK program should prioritize?

II. General questions about Health Access of Information:

12. How do you as a provider and other people in your community access information to protect the health of children?
13. What are some barriers and challenges to accessing health information for you or for others in your community?

14. What are some resources community members feel are needed to help break down these barriers and challenges?
15. What are some ways of interacting with community members?
16. How can we contact you to share back results?
17. Anything else you would like to share?

Appendix B

Table 1: Needs Assessment Coding Manual

Code	Code Description	Definition/Examples
Knowledge	Knowledge about the TFK program.	Ability to demonstrate substantial knowledge about the TFK program and activities that occur.
Knowledge_Positive	Substantial knowledge about the program and activities.	e.g. “The TFK program identifies priority chemicals and chemicals of high concern.”
Knowledge_Negative	Limited knowledge about the TFK program and activities.	e.g. “I have never heard of the TFK program.”
Knowledge_Neutral	Some knowledge about the TFK program and activities.	e.g. “I’ve heard of this program and seen some of your content.”
Attitude	Perception and risk perception of chemical exposures and potential adverse health effects.	Concerned/unconcerned about risk of chemical exposures and potential adverse health effects.
Attitude_Positive	Concerned about chemical exposures and potential for adverse health effects.	e.g. “I am worried about the chemicals in the toys my children play with.”
Attitude_Negative	Unconcerned about chemical exposures and potential for adverse health effects.	e.g. “I am not worried, I played with worse things and turned out OK.”
Attitude_Neutral	Some concern about chemical exposures and potential for adverse health effects.	e.g. “I am somewhat worried about the chemicals in the toys my children play with.”

Barriers	Factors that negatively influence knowledge about chemicals in children's products.	e.g. "I do not have access to this information."
Barriers_Access	Lack of access to reliable digital devices to access the information.	e.g. "I do not have reliable access to internet so I cannot have access to this information."
Barriers_Trust	Mistrust of health systems and health care resources.	e.g. "I do not trust the information I receive from MDH/health care providers."
Barriers_Misinformation	Misinformation presented on the internet about vulnerability to chemicals and exposures.	e.g. "I see a lot of information that says these chemicals are not bad."
Assets_Access	Having access to reliable sources of information and digital resources.	e.g. "I can access the MDH social media and webpages."
Assets_Trust	Feeling confident in the information provided by health systems and health care.	e.g. "I trust the information I receive from MDH."
Assets_Accurate information	Using trusted websites to access health information.	e.g. "I use the CDC, MDH and other sources for health information."