# Evaluating the Effectiveness of Public Health Messaging in the Immigrant and Refugee Community in Minnesota

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## Abstract

Effective communication of health messages is essential in public health. Public health messaging must include accurate information and be available in different languages, specifically when designing health communications products for immigrant and refugee populations. Using in-depth interviews, this paper examines the methods that public health professionals use to evaluate the effectiveness of the health messages that they create for immigrants and refugees. Participants recognized the importance of evaluating the effectiveness of health messages as well as the difficulty of conducting an effective evaluation due to the lack of tools and resources for evaluation. Some public health professionals use different methods such as pre- and post-surveys, direct feedback, online feedback, and feedback through community liaisons. The results also suggest that many organizations do not prioritize the evaluation of the effectiveness of health messages when programs are being developed and many public health professionals are not trained to conduct evaluations. There is a pressing need to create a framework for the evaluation of the effectiveness of health messages that public health professionals who create public health communication products and messages for immigrant and refugee populations can use.

*Key words*: *Public Health, Minnesota, Immigrant, Refugee Community.*

# 1. Introduction

In public health, communication is essential to provide individuals, communities, and countries with adequate and accurate information to help inform their health-related decisions (WHO, 2020). Among many realizations of public health, effective public health messaging has been key in educating communities about the negative effects of smoking and the benefit of water fluoridation and correcting misinformation regarding vaccines (Krisberg, 2014). Wojcik insisted that "the right message at the right time from the right person can save lives" (Wojcik, 2019). However, immigrant and refugee populations still face many inequalities related to accessing effective health information due to language barriers, level of education, health literacy, and racism (Dye et al., 2019). As Khullar explains, immigrants experience challenges accessing health insurance, face aggressive immigration laws, and find navigating the healthcare system confusing and intimidating (Khullar, 2019).

In Minnesota, the immigrant population accounts for 10% of the total state population. Approximately 12% of immigrants are originally from Mexico, 8% from Somalia, 6% from India, 5% from Laos, and 5% from Ethiopia (American Immigration Council, 2020). According to the data from the Minnesota Compass, 6% of Minnesotan immigrants do not speak English and 14% speak English but not well and 25 %, did not graduate high school. Approximately 18% of immigrants live below the poverty line and 13 % are uninsured (Minnesota Compass, nd).

The author conducted previous research assessing the ways students that identify as immigrants and refugees access health messages. The results of this above study identified different barriers that immigrants and refugees face related to accessing accurate health messages. Some of the barriers the participants identified included the lack of trustworthiness in the source of the information (66.7%), difficulty understanding medical terms

(57.19), lack of trustworthiness in information (54.5%), cultural beliefs (45.5%), lack of access to COVID-19 health messaging (45.5%), lack of English proficiency (42.4%), lack of access to health messages in general (21.2%). Dye et al insists that public health professionals need to pay attention to these disparities when creating programs (Dye et al., 2019).

In addition to understanding the barriers of effective health messaging, the author gathered recommendations that research participants had for health professionals that create health messages for immigrants and refugees. The respondents recommended that health professionals advocate for the inclusion of more languages when creating health messages, build relationships of trust with the immigrant and refugee communities, provide more resources and services for these communities, consider people's level of health literacy and cultural beliefs when creating messages, etc. Having examined health communications from the lens of the recipient, the author was inspired to research health communications from the lens of the health professionals who create messages for immigrants and refugees for this capstone project.

A common method of evaluation for health communication used by the World Health Organization (Table 1) (WHO) is The Principles of Effective Health Communication which looks at the accessibility, actionability, relevance, timeliness, and understandability of health messages (WHO, 2020). The WHO recognizes that evaluation helps to judge if a health message reached the objective and audience that it was intended for. Is the health message informing decision-making, is it improving people's knowledge about a particular topic, or is it making a difference in individuals and communities? (WHO, 2020). These are some of the questions that can be answered through the evaluation of the effectiveness of health messages. Accessible health communications messages and materials are critical for refugee and immigrant populations to help reduce health disparities that are related to a lack of

information and knowledge to address decision-making.

**Table 1. WHO Principles of Effective Health Communication**

| Principles | Definition |
|---|---|
| Accessibility | Evaluates if and how the population accesses needed information to improve their health |
| Actionability | Assesses if health professionals understand their populations of interest to create effective messages and interventions |
| Credibility | Looks at the level of trust that policymakers put into health messages and how this help address decision-making |
| Relevance | Evaluates people's understanding of the risk of different health issues and their severity |
| Timeliness | Assesses if people access important health messages in a timely manner |
| Understandability | Evaluates the language used to communicate health messages to specific populations |

Many studies have looked at the disparities that immigrant and refugee populations face regarding access to health care as seen in Dye et al. and Khullar and Chokshi articles cited above. As a result, many organizations have invested in culturally appropriate messaging and even translation of public health messages. However, the literature on the effectiveness of these messages being evaluated was non-existent. Knowing the importance of effective health communication, this research will attempt to look at how public health professionals assess the effectiveness of messages they create for immigrants and refugees. By conducting interviews with health professionals who create health messages for immigrant and refugee populations, this study intends to answer the question "How do health professionals who work at different types of organizations evaluate the effectiveness of health messages that they create for immigrants and refugees?"

## 2. Methodology

### 2.1 Participants Selection
To examine how health professionals evaluate the effectiveness of health messages they create for immigrant and refugee populations, the author

recruited six public health professionals. The participants were contacted using emails that were sent to individuals and organizations that fit the inclusion criteria mentioned below. The recruitment process was also done through a snowball sampling method. This research included health professionals ages 18 and older who create health messages for immigrants and refugees in Minnesota. The author included health professionals who work in non-profit, governmental, and international organizations. The author excluded non-health professionals, health professionals who do not create health messages for immigrant and refugee populations, and those who are younger than 18 years old.

## 2.2 Procedure

Data was collected using semi-structured interviews of health professionals who fit the inclusion criteria. Using qualitative methods such as interviews allows the author to hear directly from participants and understand their perspectives and social reality. It also allows the author to use report results using participants words (McLeod, 2019). Interviews were conducted virtually via Zoom. Interviews were 30 minutes to 1 hour long. All questions were read out loud to the participants (Appendix). These questions asked about the populations that the participants serve, the methods used for the evaluation of health messages, as well as the challenges of health message evaluation, and some recommendations. Some explanations of the questions were provided when needed. No treatment or therapy was given to participants in this research. After completing the interview, participants were given a notebook as a thank you gift.

## 2.3 Materials

Ethical approval was sought and given by the Institutional Review Board of St. Catherine University (# 1528). Ethical approval is needed in human subject research to ensure that this research is done ethically, and that participants' confidentiality was preserved. Participants were required to sign consent forms or to verbally state

their consent before the interviews began so that they understood the implications of the research and the confidentiality guidelines. All communication regarding the research was done through email correspondence and zoom meetings. The interview transcriptions were done through a professional Zoom account using my St. Catherine student email and kept in a password-protected folder. Data was collected once from every participant with the possibility to ask additional clarifying questions via email after the interview. All transcriptions were reviewed to correct grammatical errors.

## 3. Analysis

To achieve the goal of this research which is to look at how health professionals evaluate the health messages that they create for immigrants and refugees, the data collected through interviews were organized and prepared for analysis. All the interviewed transcriptions were reviewed and corrected before analysis. Using a content analysis method keyword and recurring phrases were gathered and used to generate themes that arose in the interviews. The content analysis method allows the researcher to "analyze the presence, meanings, and relationships of certain words, themes, or concepts" and summarize the data (Content Analysis, 2022). In this study, the questions used during the interviews facilitated the choice of themes. Themes were broken down into sub-themes and participants' words were used to illustrate the meaning of the themes and sub-themes.

## 4. Results

### 4.1 Participant Characteristics

The study participants represent different organizations including the Minnesota Department of Health, the City of Minneapolis Public Health, and Well share International. These organizations serve different populations including immigrants and refugees respectively on a state level, a city level, and even internationally. The immigrant and refugee

communities they serve in Minnesota include the East African community and primarily the Somali and Oromo communities, the Latinx community, and the Hmong community. Most of the participants ethnically identify as part of one of the communities that they serve. Some participants had an educational background in public health and have been trained in health message evaluation while others had not been trained in health message evaluation and do not have a background in public health. The interview participants' roles in their organizations include Project Coordinator, Community Health Workers, International Health Planner, Public Health Educator, and Community Outreach Coordinator.

## 4.2 Findings

During the result analysis process, three themes with multiple sub themes were derived from the interviews of health professionals who create health messages for immigrants and refugees. As shown and explained below, these themes include the importance of knowing the audience, the methods of health evaluation, and the challenges in the health messaging process.

## 4.3 Theme 1. Importance of knowing the audience

Study participants talked about recognizing the importance of knowing your audience. Knowing your audience helps determine the types of platforms that will be used to reach those audiences. This is particularly important because the communities that they serve are diverse. The sub-themes that are connected to knowing your audience are cultural backgrounds and influences, making emotional connections, and language and communication norms.

## 4.4 Cultural backgrounds/Influences

This is sometimes connected to religion and or ethnic groups within people from the same country. As one participant noted:

*"There's a large population that we serve, we focus on Somali and Oromo communities, and the Latinx community…but also, we like to collaborate with other partners to see how we can even serve more people …and have a mix of faces coming to our events"*

## 4.5 Emotional Connections/Preferences

The participants talked about the importance of knowing your audience to make emotional connections. In some cultures, using a grandmother figure or parents to motivate people to make behavior changes is effective. Some participants mentioned:

*"We would say to our Spanish community, get your vaccine so you can hug Abuela".*

*"To share stories with our communities, we have partnered with our faith-based community leaders, disability community leaders, African Immigrant community leaders, African American community leaders, Asian Pacific Islander community leaders, and Latinx community leaders to create stories that can speak to the specific communities"*

## 4.6 Language and communication norms

Participants mentioned that there were communication preferences in different communities that should be considered when tailoring messages. For example, participants pointed out that:

*"We use…stream yard… it's like a second place where you can record small clips and you can basically upload it to wherever you are, if someone has a stream yard, they can view it on there as well"*

*"We also try to get involved…in those WhatsApp groups as well and WhatsApp is really big in our community, especially if you're talking to relatives overseas"*

While Facebook, Instagram, YouTube, and Twitter are media platforms that are mostly used, nonprofit organizations that work with diverse communities such as WellShare International [NWWNY1] also find ways to integrate into WhatsApp groups that

different communities use to share information. Language is also recognized as an important component of knowing the audience. Organizations focus on translating messages to ensure that their populations of interest can receive and understand these ones. At the City of Minneapolis Public Health, for example, a participant confirmed that:

*"We work with the Latinx and African immigrant communities to come up with some social media graphics and get those translated into 14 different languages so that when we had requests for them, we could share them out into the community with our diverse media vendors"*

## 5. Methods of Health Message Evaluation

Interview participants recognized the importance of the evaluation of health messages in ensuring that the target audience received and understood the message as well as in knowing how to improve health messaging in the future. Different organizations use different methods of evaluation including working with community liaisons, receiving direct feedback from community members, using social media, as well as pre and post-surveys.

### 5.1 Community liaisons
Community Liaisons, explained by one participant are:

*"Both employees of [an organization] but also belong to the community that they represent…they participate in community events and they're out hearing what you know folks are saying in the community".*

In many instances, community liaisons provide feedback on health messages before these are sent to the community. They are considered experts in their community and capable of representing the community. For example, at the City of Minneapolis Health Department and the Minnesota Department of Health, participants respectively noted that:

*"To get feedback from different communities, we sent our flyers and education materials to leaders in those organizations…before dispersing it out they would give us direct feedback."*

*"We will meet with our Community Liaison and present whatever we have a video, flier infographics to them and ask what your thoughts on this are, do you have any feedback on content and visuals or anything like that"*

### 5.2 Direct Community Feedback
Direct Community Feedback includes feedback that comes directly from community members through interactions with health professionals, social media comments, or feedback from phone calls and text messages. This feedback might be solicited or unsolicited and is sometimes explicitly conducted at the end of a community education session:

*"I was able to translate the material to Somali and educate people about that and then get feedback after that… There's a session after that where folks who have questions could respond directly to me"*

For many participants, receiving direct feedback from the community is the preferred form of evaluation because it accurately reflects what the community thinks of the health messages. A participant confirmed that

*"Having that open line… for [community members] to call us and ask us questions directly…is what we take as being accurate and productive with our messaging"*

*"Having that direct Community feedback almost tells a bigger part of the story, because they can tell you what they liked about it, what didn't they like about it, what you know, was the language helpful what other languages would have been helpful."*

### 5.3 Social media
As far as evaluating the effectiveness of health messages shared through social media, health professionals rely on comments and the number of

people who clicked the links or shared them. However, as one participant pointed out

*"it is difficult to know if a social media post was shared massively because it was helpful or because it was controversial. Even in the comments, sometimes you find comments that range from both extremes meaning that some people find the message helpful while others don't".*

## 5.4 Pre and Post Surveys and Likert scales

Are used to assess the impact of a health message on communities. Pre and post surveys are usually done as explained by one participant

*"If you're doing outreach, we take a survey before and then we go through the health promotion materials, explain everything and then we'll do the same survey after like a pre-post evaluation"*

The same participant explained the importance of using Lickert scales as a quick and effective way to evaluate the effectiveness of health messages. They explained:

*"Personally, I find that if you have closed-ended questions, rather than open-ended, if you're trying to do, like the post-pre-post evaluations, and if you are using Lickert scale asking how well you feel like you know this material, for you as an evaluator that would make it easier rather than open-ended questions"*

## 6. Challenges in the Health Messaging Process

Challenges arise in the health messaging process when health professionals are not able to ensure that the messages, they create reach the right people, or if their populations of interests are able to understand the language used in these messages, or even when health professionals do not have access to adequate health message evaluation method and training.

## 6.1 Difficulty reaching the target audience

When creating health messages, health professionals tailor their messages to specific populations and intend for the health message to reach that population. As one participant mentioned:

*"We would post material on our website, and we'd share with the community, but we would also partner with specific cultural organizations like the Somali Resettlement services, and an organization that represented the Hmong community, and another one that represented the African American community."*

However, often it can be challenging to reach the target audience like in the instance mentioned by a participant:

*"You can hand out a flier to people, but you won't know if they will read it when they get home or if they will just throw it away".*

## 6.2 Translation barriers

Translation Barriers can prevent health professionals who rely on translation from conducting evaluations in certain communities. This is shown by the lack of enough translators in different organizations, the focus on translation when health messages are being created but not during the evaluation process.

*"Translating, I think, is a big challenge and I think more programs should have a budget for translators, rather than using my community health workers for people that are not translators as a translator"*

## 6.3 Lack of evaluation method and training

When evaluating the effectiveness of health messages, the participants of this study rely on the responses from community members. However, there are no criteria used to assess the effectiveness of the health messages in comparison to their intended purpose. One participant mentioned that:

*"what we take as being accurate and productive with our messaging is when we don't get a lot of questions back".*

In addition to the lack of evaluation methods that health professionals can use, there is also a lack of training in evaluation. A participant admitted that:

*"No, I was not trained in health education or evaluation. This is a field that I was kind of thrown into with the Covid 19 response, we were responsible and required to respond to the pandemic and we were initially all put into different groups, I was thrown into communication, and I said well, let's see how that goes"*

## 7. Discussion

This study examined methods that public health professionals use to evaluate the effectiveness of health messages that they create for immigrants and refugees. Among the different methods for evaluation of health messages that public health professionals use, direct feedback from the community was the preferred method of the participants but also the hardest to access. Public health messages are disseminated using different methods and it is difficult to hear directly from the communities that receive health messages. Public health professionals also use other methods such as surveys, pre-post evaluations, and receive information regarding the impact of health messages they created for immigrant and refugee populations through community liaisons. In his article *Evaluating Health Communication Programs to Enhance Health Care and Health Promotion*, Kreps reminds us that evaluation of the effectiveness of health communication products can inform us whether the health messages are having a positive or negative impact on communities and if they accomplished the purpose for which they were created (Kreps, 2014). He encourages the development of a valid method for evaluation that can inform health messaging and improve health communication. According to Kreps, "poorly conducted research is worse than no research at all" (Kreps, 2014). Kreps recommends combining different evaluation designs such as the longitudinal research design to receive feedback at different points in time by conducting surveys, observations, and textual analysis; and the pre-post experimental design to compare different results. He also encourages the collection of quantitative and qualitative data for a richer understanding of the effect that health messages have on their target populations (Kreps, 2014).

Some limitations of this research include the size of participants, selection bias, and response bias. Only six participants were included in this study. Although the participants serve many immigrants and refugees in Minnesota, they cannot represent all the organizations that serve these populations. There is also potential bias in the selection of participants. Some participants were recruited through a snowball sampling method. This resulted in interviewing more than one participant from the same organization. The participants may also be biased in their responses depending on their personal beliefs, experiences, and opinions. Future research on this topic should be conducted using a larger sample size that represents a larger part of public health professionals who work with immigrants and refugees, selection should be done over a longer period of time to ensure that there is time to recruit enough participants and reduce bias, researchers should also conduct more than one interview to reduce the likelihood of bias in the responses.

To evaluate the effectiveness of a tuberculosis education video created for immigrants and refugees, Wieland et al conducted a focus group to evaluate the impact of the video by doing a pre-video survey and a post-video survey. Some criteria of evaluation used by Wieland et al include acceptability which assesses how clear, helpful, and important the video was, knowledge which asked people questions regarding their understanding of the topic, and self-efficacy which looks at the confidence that participants gained in knowing where to find resources about tuberculosis (Wieland et al. 2013). Like the WHO recommendation, it is

important when doing evaluations to have criteria to use to determine the effectiveness of health messages. To assess the effectiveness of health messages created for immigrants and refugees, different organizations can develop criteria of evaluation or use criteria such as the ones provided by the WHO including accessibility, actionability, relevance, timeliness, and understandability of health messages (WHO, 2020).

## 7. Public Health Competencies

Some foundational competencies covered in this project include:

● "*Assessing population needs, assets, and capacities that affect communities*". This research assessed the needs for immigrants and refugees to receive effective health messages to ensure they can make well informed health decisions. It also assessed the capacities that public health professionals need to ensure that the messages that they create for immigrants and refugees are effective.

● "*Selecting quantitative and qualitative data collection methods appropriate for a given public health context*". In

the context of this research interviews were used as a qualitative method tool that could allow the audience to hear directly from public health professionals regarding how they conduct evaluation of health messages.

● "*Displaying critical self-reflection, cross-cultural awareness/cultural fluency, and ongoing learning in addressing global health problems*". Lack of access to effective health communication is a barrier to achieving health equity. This project attempted to address the gap that exists between the intention of public health professionals who create health messages for immigrants and refugees and the way they evaluate the outcome of those messages. While this research can be used to identify barriers and difficulties that surround health communication in immigrant and refugee communities, it can also help public health professionals strengthen the methods they use to provide health messages to immigrant and refugee populations. The evidence generated in this research shows that there are many opportunities to improve the quality of health messages that immigrants and refugees receive to ensure equitable access to information.

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## Appendix

Interview Questions

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| --- |
| 1. What is your role in your company? |
| 2. What population do you serve? |
| 3. Do you create health messages around specific health topics? |
| 4. What platforms do you use to share health messages? |
| 5. What is your main purpose when creating a health message for a specific population? |
| 6. How do you determine that a health message was effective? What criteria do you use? |
| 7. Why do you think the evaluation of the effectiveness of health messages is important? |
| 8. What are the challenges of conducting the evaluation of the effectiveness of health messages? |
| 9. What are your recommendations for conducting an evaluation of the effectiveness of health messages? |
| 10. What is your educational background? Were you trained in evaluation of health messages? |

[NWWNY1] WellShare International is a non-profit organization that works with diverse communities to promote health and wellness and reduce health disparities.