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Vaccinating Vulnerable Populations

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VACCINATING VULNERABLE POPULATIONS

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Submitted in partial fulfillment of the
requirements for the degree of
Master of Arts in Nursing

AUGSBURG COLLEGE
MINNEAPOLIS, MINNESOTA

2014

Abstract

Influenza vaccination rates for all minority groups in Minnesota are lower than rates for Caucasians of all age groups. Since 2006, a collaborative partnership called Minnesota Immunization Networking Initiative (MINI) has provided free influenza vaccinations in convenient and trusted community settings throughout the Twin Cities metropolitan area of Minnesota in an attempt to address this health disparity. The literature highlights a number of barriers that negatively influence individuals' choices regarding acceptance of influenza vaccination but also highlights motivators, facilitators and processes that positively impact these decisions. Thirteen focus group interviews were conducted with individuals from the Ethiopian, Latino, Native American and Somali communities in 2013 to understand reasons for their continued lack of participation at MINI clinics. Utilizing themes identified from these focus groups, MINI partners and community site contacts proposed to co-create a culturally sensitive and language appropriate educational and communication toolkit to improve knowledge about influenza and influenza vaccination. The ultimate goal is to influence individuals' decisions to obtain annual influenza vaccinations as a means of maintaining health and wellness. If successful, this collaborative educational approach would improve influenza vaccination rates and reduce or eliminate this health disparity in some of the state's most vulnerable populations.

Keywords: influenza, influenza vaccination, minority populations, Leininger

Acknowledgements

Life is a journey that involves setting and achieving goals toward the fulfillment of ones purpose. Although each of us is responsible for the progress that we make along the way, that path forward is also dependent on the love and support we receive from friends, family, and our faith in the Omnipotence that guides humanity.

I am grateful for my friend and professional colleague, Pat Peterson, whose energy, intellect, and call to service created the opportunity to pursue this project and my role in the Minnesota Immunization Networking Initiative (MINI). She and my academic advisors, Joyce Miller, RN, DNP, and Cheryl Leuning, RN, PhD, served as mentors and readers who offered invaluable suggestions and input needed to complete this endeavor.

My parents, Dr. and Mrs. Paul Brown, played an essential role in shaping my character and influencing my decision to pursue nursing as they planted the seeds of love, kindness, and service to others from an early age. By example, they encouraged a lifelong pursuit of education and nurtured my desire to explore and appreciate the richness of human diversity. They also imbedded a love of the universal language-music- in every fiber of my being. If I am able to emulate their devotion to each other and to family and friends as a role model to those I love, I will be deeply grateful.

Finally, I thank my dear husband, Michael. He provided the unwavering support and encouragement essential to accomplish this goal. More importantly, he is the person who fills my heart and soul with comfort and joy each moment of every day as we walk together along the path toward fulfillment of life's purpose, to serve others by extending unconditional love and accepting the gift of love in return.

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Vaccinating Vulnerable Populations

Chapter One: Introduction

Minnesota's population has become more racially, ethnically and culturally diverse. A common desire of all residents, regardless of color or background, is to maintain or improve health and wellness as individuals, families, and communities. One approach to health preservation in communities is the promotion of childhood and adult immunizations administered by competent healthcare providers who are viewed as credible and trusted professionals by those they serve. Although the influenza vaccine is not 100% effective, immunization remains the best weapon for preventing the spread of influenza and its potentially devastating complications. Minnesota is among the states that lead the nation in influenza coverage; however, the state vaccination rates for all age groups of racial and ethnic minorities consistently fall below those for Caucasians. There are many avenues for individuals to receive an immunization. One is the Minnesota Immunization Networking Initiative (MINI), a collaborative of private and public partners that offers annual influenza clinics at non-traditional community sites that serve uninsured and minority populations throughout the Twin Cities area of Minnesota. Despite offering the vaccine at no charge in convenient and trusted settings, the vaccination rates for a number of minority groups in Minnesota remain low. Hutchins, Fiscella, Levine, Ompad, and McDonald (2009) in their review of epidemiological information on racial and ethnic minority populations highlighted some of the reasons for this disparity, including socioeconomic, cultural, educational and linguistic barriers. Hard-to-reach populations such as undocumented immigrants, substance users, homeless, and homebound elderly are also affected by unnecessary morbidity and mortality that

results from influenza (Vlahov, Coady, Ompad & Galea, 2007). Obstacles such as attitudes and belief systems, negative experiences with past treatment, and language barriers in patient-provider relationships can affect ones personal choice to receive the vaccination. A holistic approach is needed to understand and address these barriers.

Several attempts have been made to gain a deeper understanding of how people from different cultural groups in Minnesota think about influenza and influenza vaccination. In 2013, 13 focus group interviews were held with Ethiopian, Latino, Native American, and Somali persons living in the Twin Cities of Minnesota. Meaningful themes emerged from the focus group discussions. The purpose of this project is to use the themes related to influenza and influenza vaccination knowledge identified in the focus groups to create culturally sensitive and language appropriate educational and communication tools for Ethiopian, Latino, Native American, and Somali persons living in the Twin Cities. The ultimate outcome of this project is to improve vaccination rates in minority populations.

Background

Minnesota is considered one of the healthiest states in the nation, but for populations of color and Native Americans, that is not necessarily the case. Economic inequalities and health disparities contribute to ongoing challenges an ever-growing number of minorities face. According to the United States Census Bureau (2013), the estimated population of Minnesota is 5,420,380. The largest group by race is Caucasian (White alone, not Hispanic/Latino), which comprises nearly 82.4 % of the people. The remaining population includes 5.5 % Black/African American, 1.3 % American Indian/Alaskan native, 4.5 % Asian/Pacific Islander, 4.9 % Hispanic/Latino and 2.2% of

two or more races. The percentage of people of color and Native Americans grew from roughly 6 % of the population in 1990 to 15 % by 2010 and is projected to grow to 22 % by 2025 (Minnesota Department of Health & Healthy Minnesota Partnership, 2012). In the report to the Minnesota legislature in 2013, the Minnesota Department of Health (MDH) provided information from the Behavioral Risk Factor Surveillance System indicating that influenza coverage for the 2011-12 season was 42.6 % for American Indians, 32.7 % for African/African Americans, and 29.4 % for Hispanic/Latino populations. These percentages fall far below the Healthy People 2020 goal of 70 % for adults aged 18 years and older (Centers for Disease Control and Prevention [CDC], 2013a) indicating there is a need to focus efforts on improving influenza vaccination rates in minority populations.

In 2006, a coalition of public and private partners was established to address the need to increase influenza and pneumococcal vaccinations among minority populations in the greater Twin Cities area of Minnesota. Since its inception, MINI vaccinators have provided more than 52,000 free influenza and pneumococcal immunizations (see Appendix A) to uninsured and underserved persons in non-traditional community clinic settings such as churches, mosques, temples, community centers, and food shelves. MINI providers go only where they are invited, and the clinics are organized and hosted by individuals from the community sites. The clinics are held at a time when people are already in the building for another reason such as a worship service or community dinner. During the past four flu seasons, the MINI collaborative received a grant from the Minnesota Department of Health, Office of Minority and Multicultural Health (2013a) to address the health disparity surrounding immunizations. As part of the evaluation for this

grant, nearly 5000 people completed an anonymous convenience sample survey during the 2010, 2011, 2012, and 2013 flu seasons so that MINI partners could better understand the demographics and reasons individuals choose to obtain a flu vaccine at the MINI sites. During 2010 and 2011, the top three reasons that individuals received the vaccinations were (a) the shots were free, (b) they lacked insurance, and (c) the vaccinations were offered at a trusted setting. During the 2012 flu season, the first two reasons remained the same, but providing a trusted setting dropped to fourth place behind convenience as a reason for choosing the community site. Although this information provided some insight about reasons people choose to receive the vaccine at MINI sites, it did not explain the continued lack of participation by some of the largest minority groups in the Twin Cities, specifically Ethiopian, Latino, Native American, and Somali populations. This suggested that there is a further need to explore and understand the reasons people choose not to receive the vaccine so that culturally sensitive and appropriate educational and communication materials could be created to improve influenza vaccination rates in these underserved minority populations.

Thirteen focus group interviews from the Ethiopian, Latino, Native American, and Somali communities in the Twin Cities were conducted at the end of the 2012-2013 influenza season. Focus group members were recruited by local community partners, and each person received a meal and a \$35 stipend for participating. The participants included 68 women and 51 men with an average age of 39 years. A majority of 65% reported they had health insurance, and 73% indicated they had a regular doctor or clinic. Although 68% reported they had received an influenza vaccination at least once in the past, not all of those individuals reported receiving annual influenza vaccination. Some

key themes identified by all focus groups were (a) the need to understand the difference between a cold and the flu, (b) the need to understand the seriousness of influenza for all individuals and those who are at highest risk, and (c) the need to understand the mechanism of influenza transmission and the mechanism by which vaccination protects individuals. Additionally, the focus group participants identified that they trusted the following sources for receiving information: their doctor, nurse or clinic; leaders in their churches or faith communities (including their priests, imams, pastors or other spiritual leaders); and the Internet and local television news. Participants also expressed a desire to receive written information translated into their own language and to have it presented verbally in small groups for those who cannot read.

In summary, all groups expressed the need to have educational materials and in-person discussions to help them achieve a balanced understanding about the threat of contracting influenza and the efficacy, effectiveness, and safety of receiving the vaccine. The significance of the shared themes determined the next step of creating educational tools and developing communication strategies to increase influenza vaccination rates in these minority populations.

Significance of Project

The significance of this project is the implication it has for all levels of government and non-government, public, and private institutions and organizations as well as individual health care providers. Preventive health care, such as vaccination, is always a good investment of time and money when considering the unnecessary economic impact due to loss of productivity as well as costs incurred from clinic visits, hospitalizations, and potential deaths. Improving the immunization rates in children and

adults has been an area identified for support at the federal, state and local levels through the Healthy People 2010 goals and again as part of the Healthy People 2020 goals.

According to the Healthy People 2020 web site,

Acute respiratory infections, including pneumonia and influenza, are the 8th leading cause of death in the United States, accounting for 56,000 deaths annually. Pneumonia mortality in children fell by 97 percent in the last century, but respiratory infectious diseases continue to be leading causes of pediatric hospitalization and outpatient visits in the United States. On average, influenza leads to more than 200,000 hospitalizations and 36,000 deaths each year. (U.S. Dept of Health and Human Services, 2013, para. 9)

The Healthy People 2020 target of increasing influenza immunization rates for minorities has important implications for nurses. As healthcare providers and educators in the community, nurses can offer a forum that gives voice to individuals' needs from the Ethiopian, Latino, Native American and Somali communities regarding their understanding about influenza and their concerns about receiving influenza vaccination. According to Houser (2012), "qualitative research provides a rich dimension to the design of nursing interventions and gives voice to patients' needs, preferences and concerns" (p. 446). One of the key roles and responsibilities of nursing is to educate patients using evidence-based information and practices. It is important to uncover misperceptions and misinformation about influenza and influenza vaccines that may prevent individuals from receiving annual immunizations against this disease even when it is offered at no cost. By understanding real or perceived barriers, messages can be developed that specifically address those concerns. It is also important to reinforce

accurate perceptions and beliefs that improve health outcomes. Houser articulated the importance of evidence-based practice in nursing by suggesting that “patient outcomes are substantially improved when health care is based on evidence from well-designed studies versus tradition or clinical expertise” (pp.14-15). When addressing concerns about influenza vaccine for a specific population, it is important to be knowledgeable about the values and beliefs of that population in order to appropriately apply the evidence. By collecting, comparing, and contrasting perceptions and beliefs about influenza and influenza vaccine, nurses may identify universal themes that allow for effective standardization and improved educational and communication materials. Collecting this information also offers an opportunity to acknowledge unique attitudes and beliefs that can be incorporated and customized into respectful and culturally appropriate care. For nurses as educators in the public realm, providing culturally appropriate and scientifically accurate information is an ongoing responsibility that will only continue to grow as the demographics of the populations continue to change. It is therefore essential for nurses to continually collect and analyze data to better understand what impact education has on altering behaviors and to adjust information and messaging to effect positive and sustainable change.

Nursing Theoretical Foundation

Madeline Leininger's (2006) Theory of Culture Care Diversity and Universality provides a holistic approach to understanding how cultural values, beliefs, and worldviews shape, define and guide decisions related to health and wholeness for individuals, families, groups and communities. Her work reflects “a keen awareness of a rapidly changing world” (p.1) and has been successfully used with many different

cultures in a variety of settings around the globe. Her theory provides a pathway to create a partnership among nurses and individuals that is innovative, respectful and effective in supporting the path to healing and wellness. Within that partnership, it is important to openly share and understand similarities and differences that help define meaningful care. It is also important to explore the concept of care within the context of each unique culture. This understanding of similarities and differences regarding care can only be illuminated by exploring views from inside (“emic”) and outside (“etic”) (p.14) the culture and is based on a trusting relationship that develops between care provider and care recipient over time. Leininger (2006) borrowed linguistic terms from anthropology to describe the viewpoint of persons from inside and outside a culture. According to Leininger, “The term *emic* refers to the local, indigenous, or insider’s cultural knowledge and view of specific phenomena; whereas *etic* refers to the outsider’s or stranger’s views and often health professional views and institutional knowledge of phenomena” (p. 14).

Leininger’s (2006) Sunrise Enabler claims that cultural and social structure dimensions such as technological, educational, economic, political and legal, social and kinship, as well as religious and philosophical factors influence care expressions, patterns, and practices regarding health, illness and death. These dimensions explain and predict meanings and expressions of care and caring within a particular culture. As such, nursing knowledge related to the cultural and social structure dimensions illuminates and guides culturally competent care. By coming to know themes and patterns around vaccine knowledge and hesitations specific ethnic, racial and hard-to-reach populations in the Twin Cities area of Minnesota expressed, it may be possible to develop innovative

educational and communication tools that address barriers, engender trust and highlight the benefits of receiving annual influenza vaccination as preventive care that ultimately improves the health of individuals, families, and communities.

Leininger (2006) stated that the concept of care is at the core of nursing and is dependent on a unique relationship that exists between the nurse and the individuals being served. In this relationship individuals' needs must be discovered, evaluated, and attended based on their values, beliefs, and worldview that may differ dramatically from a caregiver. Leininger contended that care is often an embedded, invisible and abstract phenomenon that may include both traditional as well as professional approaches. Care provided by the nurse assists the individual with real or perceived needs that address the whole person. She further posited that "care is more than *doing* or performing physical action tasks. Care has cultural and symbolic meanings such as care protection, care as respect, and care as presence" (p.12). These aspects of care may be evidenced in the community flu clinic setting where intergenerational families often come together to receive their vaccinations. In the Latino population, where social and kinship factors play an important role in daily life, relationships may be a driving factor in the decision to receive an influenza vaccination. A nurse can assist individuals by providing information that helps guide their thinking, decisions, and actions that are rooted in values and beliefs that reflect the importance of family and relationships. One example of how these factors influence the decision to receive a vaccination is that when parents receive a vaccination, they help protect those who are most vulnerable, such as their young children and elders whom they respect. Knowing that, they are sometimes more

inclined to receive a vaccination for themselves and their family members and to encourage neighbors and friends to be vaccinated.

Culture is reflected in the values, beliefs and lifeways that a specific individual or group embrace as the basis for patterned decisions and actions. It is important to understand how different aspects of culture influence individuals' health and health care decisions about vaccination. These multiple aspects may have their basis in such factors as religion, education, social structures, and language. It is vital for nurses to use cultural knowledge to care for individuals with consideration given to traditional as well as professional nursing care practices. According to Leininger (2006), culture is "equally as important as care and is therefore not an adverb or adjective modifier to *care*" (p.13). She contends that culture is the distinguishing phenomenon of humanity. It is important to explore how the interplay of care and culture guides nurses as they interact with others to protect, maintain, and improve their health by receiving influenza vaccinations.

The linked concepts of culture and care are the basis for nursing to provide care that is culturally congruent with an individual's values and beliefs. Leininger (2006) believed that all individuals should receive care that is culturally appropriate. One example that highlights provision of culturally congruent care is accommodating the religious beliefs of Somali women who receive a vaccination in a community setting. Many Somali women are Muslim and believe that modesty and privacy must be protected (A.D., personal communication, October 28, 2010). Nurses must understand that it is culturally inappropriate to expose uncovered heads and arms in the presence of men. Care must be taken to provide privacy by vaccinating women in another room or by using a screen so that they are more inclined to participate knowing that the cultural norm of

covering their bodies is protected and respected. It is also important to ensure that a female nurse provides the vaccination for Muslim women and that no males will enter the private area while they are uncovered. Another example that respects the cultural beliefs of those who worship in the Muslim faith is to educate them about vaccine choices so they understand the components that are used to manufacture vaccine. Intranasal influenza vaccine is made utilizing gelatin which some consider to be a pork product (H. R., personal communication, December 2, 2012). Because observers of the Muslim faith do not eat pork as part of their religious beliefs, it is important that nurses offer education to address that concern or alternatively offer an injectable option prior to giving the vaccination (H. R., personal communication, December 2, 2012). Another concern may be the very minute amount of thimerisol preservative that is contained in some injectable influenza vaccine and is thought by some Somali individuals to cause Autism (Immunization Action Coalition, 2011). By offering a preservative-free type of vaccine, this issue can be addressed and accommodated.

The Sunrise Enabler serves as a visual guide to depict components of culture such as education, language, social/kinship and philosophical/religious factors that influence care expressions, patterns and practices of individuals, families, groups and communities (Leininger, 2006). The interaction of these elements helps nurses make decisions and explore actions that promote meaningful care practices and support culturally congruent care. One example of providing culturally congruent care for minority populations served in MINI clinics is engaging translators and providing language appropriate materials to address potential communication barriers. This “cognitive map” (Leininger,

2006, p.20) offers an effective way to address unique cultural needs of various individuals when serving diverse populations in community influenza vaccination clinics.

The growth of racial and ethnic diversity in the Twin Cities area of Minnesota provides a rich opportunity to understand and address the health disparity of influenza vaccination coverage in minority populations. By using Leininger's (2006) Sunrise Enabler to explore knowledge about influenza, influenza vaccination and influenza hesitancy in the Ethiopian, Latino, Native American and Somali communities, it may be possible to develop meaningful and culturally respectful educational and communication tools that will help increase vaccination rates, eliminate health disparities in this area, and ultimately improve the health of diverse communities. Chapter Two will address the review of the literature surrounding health disparities relating to cultural beliefs about influenza and influenza vaccination.

Chapter Two: Literature Review

Reviewing the literature that explores the concepts of influenza and influenza vaccine is a first step in developing educational tools to improve vaccination rates in minority populations. Second, it is important to examine the knowledge, attitudes, and beliefs of minority populations to uncover perceptions that act as barriers as well as motivators and facilitators that impact one's decision to receive or decline annual influenza vaccinations. Themes regarding perceptions and barriers as well as motivators and facilitators play an important role in the care expressions, patterns, and practices of individuals in these populations. Nurses as educators can utilize Leininger's (2006) Culture Care theory to work in partnership with key informants from minority populations to influence patterns and practices based on traditional (emic) and professional (etic) information (p.14). This partnership is crucial for identifying and addressing themes that support preservation and maintenance of health and wellness, accommodating and negotiating practices to improve health care decisions and repatterning and restructuring (Leininger, 2006) approaches that influence one's decision to receive annual influenza vaccinations. These topics will be explored in the literature to provide knowledge on ways to effectively educate minority populations on the benefits of receiving influenza vaccinations to maintain their health and wellness.

Influenza and Influenza Vaccine

A common theme for minority populations expressed, including Ethiopian, Latino, Native American, and Somali who participated in focus group interviews following the 2012-2013 influenza season, was a lack of understanding about influenza, also called the flu. These individuals stated they did not know the difference between a

cold and the flu and who is most at risk of contracting influenza. When developing tools to educate, it is essential that the information is from a reputable source.

The Centers for Disease Control and Prevention (CDC), the Minnesota Department of Health (MDH), and the Immunization Action Coalition (IAC) are all reputable sources for influenza information. “Influenza is a contagious respiratory disease....caused by a virus that attacks the nose, throat and lungs” (MDH, 2013b, para 1). According to the Morbidity and Mortality Weekly report published by the CDC, influenza viruses typically circulate throughout the United States (US) from late fall through early spring (CDC, 2013b). There are three types of influenza virus: A, B, and C (Suddath, 2008). Each type has its own strains that are altered as it is reproduced and spread around the globe. This is the reason individuals can catch the flu multiple times and why the virus is considered a “disease of modernity” as it quickly spreads throughout the world with the speed of human travel (Suddath, 2008, p.1). Types A and B are responsible for causing epidemic outbreaks in humans (CDC, 2013b). During influenza seasons from 1976 through 2007, the number of estimated deaths from influenza in the US ranged from 3,000 to 49,000 people annually. Infection rates are highest among children (CDC, 2013b), but approximately 90% of deaths occur in people 65 years and older (CDC, 2013c). Influenza disease is monitored by the MDH from October to May through weekly reports of influenza-like illness from schools, long-term care facilities, outpatient/clinics, laboratory-confirmed influenza in hospitalized patients, and influenza-related deaths (MDH, 2013c). When developing educational tools about influenza for minority populations, it is important to differentiate between the symptoms of influenza and a cold.

The symptoms of influenza can vary from very mild to extreme. According to the MDH (2013b), influenza can be very serious, and the disease can lead to health problems like pneumonia, bacterial infections, hospitalization, and even death. The distinguishing symptoms of influenza come on quickly and may be severe enough to put someone in bed for several days. They include high fever, dry cough, sore throat, headache, extreme fatigue, chills, and body aches. These differ from a cold in which the main symptoms are milder and generally include a stuffy or runny nose and sneezing. Someone with a cold is usually able to maintain normal daily activities, but someone with the flu will generally feel too sick to do anything but rest (MDH, 2013b). A number of individuals interviewed in minority focus groups stated they had never been infected with the flu virus because they have strong immune systems.

According to the CDC (2013c), influenza can spread to everyone and even healthy individuals can get very sick from the flu. Additionally, they can spread it to others who are most at risk from influenza and its complications. Those who are most at risk of getting very sick from influenza include individuals age 65 and older, young children (especially those under 2 years), pregnant women and people with chronic conditions such as asthma, diabetes, heart disease, chronic lung disease and those who are immune compromised. But even those who are not listed in these highest risk categories can become very ill with the flu (MDH, 2013b). Everyone is susceptible to influenza, and because the viral variants can change over time as it spreads to others, there is little or no pre-existing immunity among humans (CDC, 2013b). The CDC's Advisory Committee on Immunization Practices voted on February 24, 2010 for "universal" flu vaccination in the US for all persons ages 6 months and older who do not have

contraindications to receive the vaccine (CDC, 2013c, p.2). CDC's conclusion is that annual vaccination provides the best protection against contracting and spreading influenza.

Contraindications to receiving the vaccine include the following: severe allergic reaction to a previous influenza vaccine, children younger than 6 months, and people who have had a severe allergic reaction to eggs because most types of flu vaccine contain a small amount of egg (CDC, 2013c). Some people should consult with a physician because they may be able to receive the vaccine after careful assessment of moderate or severe acute illness with or without fever, a mild reaction to eggs (involving hives), and a history of Guillain-Barre Syndrome (CDC, 2013c). It is not appropriate to vaccinate individuals with these precautions in a community clinic setting. Nurses who administer the vaccine in community clinic settings must do a thorough assessment of individuals prior to administering the vaccine. It is also important to discuss the types of vaccine available and appropriate for each individual so that choices are considered based on a recipient's preference and provider's professional judgment. The CDC does not recommend one type of vaccine over another, but it does recommend the importance of annual vaccination (2013b).

Influenza vaccine is available in several forms, and the strains that are used in production change each flu season depending on which strains of viruses are predicted to circulate. The CDC (2013b) provides information and guidance on appropriate vaccine use in its annual report. During the 2013- 2014 flu season both trivalent vaccine (containing two types of A viruses and one type of B virus) and newly licensed quadrivalent vaccine (containing two types of A viruses and two types of B viruses) were

made available for use in the US. MINI clinics offered the following: quadrivalent live attenuated (weakened) influenza vaccine, an intranasal form for non-pregnant, healthy persons age 2-49 years; trivalent inactivated (killed) influenza vaccine in multidose vials for injection for persons age 6 months and older; and quadrivalent inactivated, single dose thimerisol-free vaccine in injectable form for ages 3 years and older. Those individuals who receive the vaccine are instructed that it takes about 2 weeks after vaccination to develop immunity. Focus group participants conveyed a desire to understand more about influenza vaccine efficacy, effectiveness and safety.

All vaccine provides some level of protection from influenza, but determining the efficacy and effectiveness depends on many factors. Efficacy is defined as “the prevention of illness among vaccinated persons enrolled in controlled clinical trials” and effectiveness is “prevention of illness in vaccinated populations” (CDC, 2013b, p.6). Although randomized controlled studies may reduce the chance for bias, data for specific populations may not be available, and trials are difficult to conduct because they may be considered unethical because influenza vaccine is universally recommended for all US residents aged 6 months and older. Effectiveness is generally measured in observational studies that compare the incidence of influenza between vaccinated and unvaccinated groups of people where individuals choose to receive or decline vaccination. Various outcomes measures such as prevention of laboratory confirmed illness or hospitalization, prevention of influenza-like illness, or prevention of pneumonia requiring hospitalization may be used. The more specific the outcome measures, such as laboratory-confirmed cultures, the better the estimates of the vaccine’s effectiveness. However, these outcomes can still vary widely depending on many factors such as match between the

vaccine strains and circulating strains, host factors, and sample size being studied (CDC, 2013b). Dr. Michael Osterholm, director of the University of Minnesota Center for Infectious Disease Research and Policy and his colleagues published a report regarding efficacy and effectiveness of influenza vaccine. The report included more than 12,000 peer-reviewed studies, meeting notes, and documents dating back to 1936 as well as interviews with more than 88 experts in influenza vaccine research, development and use. As Perry (2013) described, Osterholm's assessment was that influenza vaccine is inexpensive to produce and safe to administer, but its effectiveness is sub-optimal, and Osterholm recommended that there needs to be an international plan for development of a better influenza vaccine.

Influenza vaccine is considered to be very safe and has been given to hundreds of millions of people since it was developed. Most reactions are considered to be mild, which may include soreness, redness, or swelling at the injection site or nasal congestion if the nasal spray is given. Individuals who receive a flu vaccination must be given a Vaccine Information Statement as required by law (CDC, 2013e). The one-page sheet provides information about influenza, the flu vaccine, possible reactions to the vaccine, and instructions on what to do in case of a serious reaction. This information is given to individuals in their own language at all MINI clinics including Amharic for Ethiopian, Spanish for Latino, Somali for Somalis and English for Native Americans.

The CDC works closely with the Food and Drug Administration to monitor vaccine safety for all vaccine that is produced and licensed in the US. One program, the Vaccine Adverse Events Reporting System monitors information regarding any health problems that are reported following vaccination. Individuals who may have been

injured by vaccinations may file a claim with the National Vaccine Injury Compensation Program (CDC, 2013f).

Many educational tools and communication campaigns highlight the same information regarding ways that individuals and families can help protect themselves and others from spreading the flu. First and foremost, the MDH (2013b) recommends getting vaccinated. But the MDH also recommends avoiding exposure to individuals who are sick with influenza-like symptoms, frequently washing hands with soap and water or hand sanitizer, and coughing or sneezing into a tissue or sleeve. The MDH also recommends frequent cleaning of surfaces that many individuals touch, such as door knobs, refrigerator handles, phones and water faucets. When influenza becomes wide spread in the community, the MDH recommends avoiding crowds. It is especially important to stay away from those who are sick and to avoid close contact between those who have influenza and other family members or friends. Finally, the MDH recommends that those who are sick should take care of themselves by staying home; getting lots of rest; drinking plenty of fluids; and avoiding returning to school, work or community environments for at least 24 hours after a fever has subsided without the use of fever-reducing medicine (MDH, 2013d).

Knowledge, Attitudes, and Beliefs as Barriers

The literature reviewed indicates that a gap in knowledge regarding a universal recommendation to receive influenza vaccination serves as a barrier for specific segments of the population. In its 2010 report, the American Lung Association focused on disparities in influenza and pneumococcal vaccinations in older adults. The association stated that while all racial and ethnic groups access health care at about the same rate,

White patients are more likely to be vaccinated than non-Whites because they are more likely to be aware that the influenza vaccine is recommended and that the vaccine prevents illness. This finding is similar to Maurer, Harris, and Parker's (2011) study, which analyzed nationally representative data from 2,122 U. S. adults to measure perceived influenza recommendation status. Knowledge of influenza vaccination status varied significantly by race with 49.1% of Non-Hispanic White having the highest level of knowledge compared to 37.8% Black and 33.8 % Hispanic. Daniels, Juarbe, Rangel-Lugo, Moreno-John and Perez-Stable (2004) conducted a small focus group study with White, African American, and Latino adults. They found that a lack of knowledge about vaccinations led participants to perceive multiple fears, risks, and barriers to receiving the vaccine. Bethel and Waterman (2009) surveyed 226 Hispanic men and women ages 18 years and older in San Diego County to assess their awareness of influenza vaccine and other preventive measures. The results revealed an overall awareness of nearly 90%, but the actual vaccination rate for target groups ages 50 and older remained well below 90%. For those ages 50-64 years, the vaccination rate was 7.7% for males and 23.5% for females; for ages 65 and older, the rate was 33.3% for males and 59.1% for females. Bethel and Waterman concluded that the study highlighted the need for educational and outreach efforts and should especially target Hispanic men. The importance of being recommended to receive a vaccine was articulated by an Ethiopian man in the MINI focus group interviews. When asked if he had ever received the influenza vaccine and why, or why not, he answered "No, because no one ever told me" (D. W., personal communication, February 21, 2013). These studies identify an important theme that is necessary to include as part of an educational tool for minority populations: annual

influenza vaccination is recommended for all persons ages 6 months and older who do not have contraindications to receive it. Although knowledge concerning the importance of annual influenza vaccination is one potential barrier, attitudes and beliefs also play an important role in vaccination decisions.

The literature suggests that attitudes and beliefs play a significant role as potential barriers related to vaccination choices. Cameron et al. (2009) conducted focus group interviews using a protocol that was designed to elicit knowledge and attitudes about influenza vaccine as well as past experience with the vaccination. Their results showed that African Americans ages 65 and older are less likely to be vaccinated than non-Hispanic White seniors and that the decision to receive or decline vaccination was based on themes around perceived susceptibility (“Am I at risk for influenza?”), perceived severity (“How bad is influenza?”), perceived self-efficacy (“I am able to get a flu shot.”) and perceived response efficacy (“Getting a flu shot will protect me from getting influenza this year.”) (p.318). Some of these same themes were expressed in MINI focus group interviews.

One theme around perceived susceptibility in MINI focus groups was that self-care and strong immune systems protect individuals from the flu. Another theme around perceived severity expressed particularly in the Ethiopian groups was that flu is not serious and that it is a seasonal illness like a cold. A third theme around perceived response efficacy expressed skepticism about the efficacy, effectiveness, and safety of flu vaccine. A number of Latino members in particular expressed the belief that the influenza vaccine can actually give someone the flu and that it makes you sick. This

theme is consistent with other research that explores attitudes and beliefs regarding influenza vaccine safety and effectiveness that have an impact on vaccine acceptance.

A study Santibanez, Mootrey, Euler and Janssen (2010) conducted examined behavior and beliefs about influenza vaccination through a national randomized digit-dial telephone survey of 8710 adults over age 50. The beliefs were strongly correlated to vaccination status and many beliefs were inconsistent with scientific data about efficacy and safety of the vaccine. Beliefs about vaccination varied by race/ethnicity, age, education, and gender, suggesting the need for educational campaigns designed for specific subgroups. Galarce, Minsky and Viswanath (2011) conducted an online survey of 1569 respondents drawn from a nationally represented sample of adults age 18 and older to understand how socioeconomic status, demographics and beliefs impact vaccine uptake. Their findings show that vaccine acceptance is associated with age, urbanicity, and perceptions of vaccine safety while declination varied by a number of sociodemographic factors. Galarce et al. recommended that strategic public health communication campaigns should be tailored to address social class, race/ethnicity and beliefs, also known as “psychodemographics” (p.5289). Redelings et al. (2011) recruited 1541 clinic patients in a low-income public health clinic in Los Angeles County to complete a cross-sectional survey designed to assess knowledge, attitudes and beliefs about influenza vaccinations. Their conclusions suggest that several underserved demographic groups (Latino and Blacks) could be disproportionately affected during a pandemic influenza season due to negative beliefs about vaccine safety and efficacy. Black respondents were also less likely to agree that they trust doctors/clinicians who recommend vaccines. Johnson, Nichol, and Lipczynski (2008) conducted a structured

telephone interview with 2,002 individuals concerning their attitudes and knowledge about adult vaccinations and factors affecting their decisions to receive or decline receiving them. Most individuals (96%) were aware of the influenza vaccine, and 82% said they believed it was important to stay up-to-date with immunizations, yet 34% said they were skeptical about receiving any type of vaccine. One example of this belief was that 26 % of respondents were aware of the influenza vaccine but did not receive it as recommended because they were concerned about getting the disease from the vaccine. Other reasons for not getting the influenza vaccine included they did not know when to get it (21%) and they were concerned about side effects from getting it (43%). It is clear from the literature that education can address a lack of knowledge as well as influence attitudes and beliefs that have a negative impact on vaccination choices. In addition to barriers, there are also factors that serve as motivators and facilitators to vaccination choices that are revealed in research literature.

Motivators and Facilitators

Providers can serve as one of the most important facilitators for increasing vaccinations in minority populations. When asked who had recommended they receive an influenza vaccination, all minorities in MINI focus groups responded that their doctor, nurse, clinic or a trusted community leader influenced their choice to be vaccinated. Cameron et al. (2009) noted that provider recommendations seem to be a significant factor in influenza vaccination decisions. Maurer et al. (2011) suggested that a universal recommendation for annual influenza vaccination will only be successful if it reaches patients and physicians and leads to changes in practice such as one-on-one counseling by health care providers; the use of phone, e-mail, or postcard reminders; and the

increased use of social media for reminder and recall messages. The role of providers and prevention systems was also explored in a quantitative before and after trial by Nowalk et al. (2008). Nowalk et al. concluded that culturally appropriate, evidence-based interventions improved adult vaccination rates in disadvantaged, racially diverse, inner-city populations over 4 years. Another study by Zimmerman et al. (2009) was designed to assess physician and practice characteristics that explain differences in vaccinations rates in urban practice settings. Zimmerman et al. concluded that time spent with patients and the use of standing orders positively impacted vaccination rates. Nowalk et al. (2009) used quantitative and qualitative approaches to understand racial disparities in adult vaccination and concluded that the potential for eliminating or reducing racial disparities in vaccination rates may be improved by the systems used in a practice and by physician commitment to vaccinate patients. A data analysis by Maurer, Uscher-Pines and Harris (2010) concurred that provider-based vaccination counseling may help increase awareness of federal recommendations, but this benefit may be limited to individuals who have contact with a provider during the influenza vaccination season. Maurer et al. advocated for a more comprehensive marketing campaign to increase awareness and promote vaccination. These studies all suggest that nurses as care providers can play an important role in improving vaccination rates in vulnerable populations by offering educational materials and in-person discussions with partners at trusted sites prior to a vaccination clinic. Recommendation by a provider is an important motivator, but another key facilitator is the protection of loved ones and those viewed as vulnerable to suffering from influenza infection.

MINI focus group participants in every interview session expressed a strong desire to protect their loved ones. When asked if knowing that getting a vaccination would help protect their children and other family members, most replied it would make a difference in their decision to receive the vaccine. In a study by Flood et al. (2010) prevention of influenza, reduction of influenza symptoms, doctor recommendations and avoiding the spread of influenza to others were the main drivers of parents' decision to vaccinate their children. Flood et al. further suggested that people or events can serve as a motivator or prompt for vaccination and that convenience is also an important factor in the decision to vaccinate. Frew, Hixson, del Rio, Esteves-Jaramillo and Omer (2011) also identified some of these same factors. Frew et al. conducted a cross-sectional survey of 223 individuals during the 2009 H1N1 influenza season to determine vaccine acceptance in a minority community that included mostly lower-income and Black participants. They concluded that households prioritized vaccinating their children due to the perceived susceptibility and vulnerability of children getting influenza because of increased exposure at school. Respondents did not comment on safety of the vaccine itself, and Frew et al. felt that safety concerns may not have been as important as other psychosocial factors that had a greater influence on taking "protective risks" (p. S117) in view of the concerns about susceptibility and severity of the H1N1 disease. Similar themes about provider recommendations and protection of family members were echoed in all of the MINI focus groups as strong motivators that influence influenza vaccination decisions and practices. Leininger's (2006) Culture Care theory can guide nurses to utilize these themes regarding motivators and barriers when developing educational and

communication tools in partnership with Ethiopian, Latino, Native American and Somali groups who are served at MINI clinics.

Emic and Etic Partners in Education

A critical next step in educating vulnerable populations is the engagement of key partners from inside each of the focus group cultures to work in tandem with outside MINI providers so that specific cultural care expressions, patterns and practices can be woven into education that is meaningful and respectful. It is important for nurses as educators to accomplish this work with partners inside from each of the groups because of trusted relationships that have been developed over time. Plowden and Wenger (2001) contended that “the development of a trusted relationship is based on concepts that guide the researcher in learning about cultural lifeways of people while participating in cultural activities” (p.36). MINI providers and community partners have observed each other while building confidence in their relationships over multiple years as they have worked together to plan, schedule, and provide vaccination clinics for community members in their own trusted and convenient settings. Individuals from the communities can also act as key informants in the creation of educational tools that are language appropriate and respectful of specific religious, social, and cultural worldviews. According to Leininger (2006), key informants provide “an indepth source of information along with the researcher’s direct observations and participant experiences” (p.75). Leininger further posited that nurses must “enter the informants’ world of knowing and learn from them about their knowledge and practices related to care, health, well being, illness ... prevention modes, and other actual or potential areas of interest to nursing” (Leininger, 1997, p. 42). By working together to create and offer education on influenza and

influenza vaccination, MINI and community partners can inform, influence, and improve individuals' decisions to obtain vaccination within each community. In Nowalk et al.'s (2008) study, interventions that included minority team input and planning contributed to increasing vaccination rates in racially diverse inner city health centers over 4 years. Additional factors that contributed to the success in these clinics included creating interventions that were culturally appropriate and individualized to the population being served, establishing and maintaining trust among community members, and including all clinic personnel in determining all aspects of the project, thereby influencing ownership for improved vaccination rates and project success. Vlahov et al. (2007) noted that faith-based centers were often effective collaborators because of the community's high level of trust in them. Other successful strategies Vlahov et al. identified included mobilizing trusted spokespeople, delivering culturally appropriate education materials, and providing messages that highlight the benefits of vaccination for others such as children and elders.

Using a partnership approach allows these and other factors to be considered so that standardized educational tools can be tailored to fit specific language needs, honor religious beliefs and practices, and support the social and kinship values and worldviews of four specific minority populations in the Twin Cities. Traditional (emic) knowledge from Ethiopian, Latino, Native American and Somali partners plays an important role in the co-creation and delivery of educational tools along with professional (etic) knowledge from MINI nurses utilizing the themes that have been identified in focus group interviews and substantiated in the review of the literature.

The review of literature confirms the need to create educational tools that focus on key facts about influenza and influenza vaccination to promote an understanding about

the disease and the benefits of receiving annual vaccination to prevent its spread to individuals, families, and communities. The educational tools must differentiate symptoms of the flu from symptoms of a cold; provide an understanding of how the vaccine works; and emphasize the efficacy, effectiveness, and safety of receiving it. These should be offered in an appropriate language for the minority populations being served. A lesson plan should also be developed to provide in-person education and communication that allows community members who cannot read to ask questions and share ideas regarding their knowledge, attitudes, and beliefs that may serve as barriers. This discussion can also provide an opportunity to reinforce motivators and facilitators that influence acceptance of the vaccine for individuals and their families. The educational tools and lesson plan should be co-created with input from trusted partners inside (emic) and outside (etic) the community to ensure that traditional as well as professional information is utilized to address themes regarding preservation of health and wellness, accommodate and negotiate practices to improve health care decisions, and identify repatterning and restructuring approaches that drive vaccination decisions (Leininger, 2006). Chapter Three will include a discussion of how the knowledge gleaned from this literature review can be used to develop an educational and communication tool kit and a project metaphor.

Chapter Three: Development of Educational and Communication Toolkit

Influenza continues to have a significant impact on the health and wellbeing of individuals throughout the United States despite the availability of a safe and effective vaccine that reduces the incidence of influenza illness and the potential complications. In my role as clinical volunteer coordinator of the MINI project, I assist with all aspects of annual preparation, implementation, and evaluation of influenza clinics scheduled and conducted at non-traditional community sites that serve uninsured and minority populations throughout the Twin Cities area of Minnesota. Despite offering the vaccine for no cost in convenient and trusted settings, the vaccination rates for a number of minority groups remain low. Utilizing information obtained from 13 focus group interviews with the Ethiopian, Native American, Latino and Somali communities following the 2012-2013 influenza season, MINI partners identified a need to provide culturally sensitive and appropriate education targeted for individuals from these communities who decline influenza vaccination. The intent of the educational and communication materials is to address the knowledge deficit about influenza and to answer questions and concerns regarding influenza vaccination to increase vaccination rates in these minority populations. This chapter will explore the development of an educational and communication toolkit that can be utilized and tailored by site contacts to meet specific needs and concerns of each community.

Engaging Emic Partners as Educators

Site contacts who are trusted clinical leaders from the Ethiopian, Native American, Latino, and Somali communities were instrumental in organizing and assisting with focus group interviews designed to elicit information about participants'

understanding regarding influenza and their decision to obtain or decline influenza vaccination. These same leaders were informed about themes gleaned from the interviews in their respective communities as well as overarching themes expressed in all groups. One clear finding was that people did not know the difference between a bad cold and influenza. Many individuals did not understand the symptoms that differentiate the two nor did they understand the seriousness of influenza, especially for those who are most at risk of getting it. A second finding was that focus group participants appreciated receiving education about influenza, but they wanted to have materials that are written in their native language. They also expressed a desire to have presentations in small group settings in their communities to be able to ask questions and have discussion among their peers. This information helps define the types of tools and messaging to be developed.

The educational and communication toolkit that will be developed includes the following: a one-page document that uses simple language and pictures to explain the differences between a cold and the flu; a resource list that contains information about influenza, including free translated materials from the CDC, the MDH and the IAC; and a lesson plan of topics to be covered in small group discussions. Credible and trusted site contacts who have a clinical background will receive a stipend to translate the one-page document into their native language. They will also receive a stipend to attend a “train the trainer” session where they will be given the tool kit with instructions on how to present the lesson plan and materials to their community members. In my role as MINI clinical volunteer coordinator, I will also work with site contacts to ensure specific cultural needs and concerns are addressed and appropriate materials are provided. Site contacts will be asked to conduct at least two educational sessions for members of their

community prior to the MINI clinics that will be scheduled to provide influenza vaccinations in these same settings.

The goal of providing information in both written and verbal formats is to reach individuals from a variety of communities with evidence-based information tailored to meet their educational and language needs and that also reflects sensitivity to their religious, social, and cultural values. Because information will be delivered in a convenient and trusted setting by individuals from each of the communities, it is assumed that acceptance of the materials and messaging will have a greater chance of successfully influencing ones decision to receive influenza vaccination.

One-Page Educational Document

As a first step in creating educational and communication tools, MINI partners decided that a one-page document that depicts differences between symptoms of a cold and symptoms of influenza would be created. A number of examples with similar types of information were accessed on the Internet to see what tools already exist and whether any could be used. MINI partners decided that by creating something that has the logo of the largest partner organization that provides MINI vaccinations, the target audience would associate materials and training with MINI vaccinators, who also offer the shots in their community sites. The assumption is that an association between training and vaccinators enhances ones likelihood of receiving the vaccine.

The next step was to utilize evidence-based information from the CDC web site to ensure that messaging is consistent with information communicated at the highest government level. A table was created to highlight the main symptoms of a cold versus the main symptoms of influenza also known as the flu (see Appendix B). The table

contains three columns across the top titled “Symptoms,” “Cold,” and “Flu.” The rows along the side of the table contain one or two words that describe a symptom associated with a cold or with the flu. Each symptom is identified as “Yes” or “No” under the columns associated with “Cold” or “Flu” to denote whether it is a main symptom of a cold or of the flu. Symptoms most strongly associated with a cold or with the flu are bolded to highlight the main differences between a cold and the flu.

An important next step was to share this information with the director of Education and Communication, the managing editor of Communications and Public Affairs and the creative design lead at the large health care system with which MINI partners are affiliated. This step provided valuable insight regarding content and layout to ensure that the information is accurate, appropriate for the target audience and looks professional. The creative team also designed a prototype that can be shared with MINI site contacts and used to translate influenza information into the native language of each community. The creative team added pictures to represent the main symptoms of a cold versus flu. This step provided another way to differentiate a cold from the flu for individuals who cannot read or can only read at an elementary level. Final signoff by the site contacts will ensure that the one-page tool accurately and appropriately reflects information that can be shared with their community members. Once the content and design has been approved by MINI site contacts, MINI partners, the education director, managing editor of Communications and Marketing and the design lead, a PDF file can be created so copies can be made and distributed on an as-needed basis to members of each community. The one-page document can be used to educate community members

about influenza along with additional information obtained from the influenza resource list.

Influenza Resource List

An influenza resource list will provide meaningful information that site contacts can use to supplement the one-page educational document and lesson plan. The resource list contains web-based information from three reputable sources. These sources include the following: the CDC; the MDH; and the IAC.

The CDC is a federal government agency that utilizes evidence-based information that can be accessed and downloaded for free. The agency employs marketing and communications experts to create user-friendly information that is available in multiple languages and a variety of formats. The CDC lists free resources such as print materials, mobile content, web tools, video/audio tools, images and pictograms that are reviewed and updated on an ongoing basis (CDC, 2014). The CDC website has information that has been translated into languages appropriate for Ethiopian (Amharic and Oromo), Latino (Spanish), Native American (English) and Somali (Somali) communities (CDC, 2012). This information can be printed directly from the web site or it can be obtained by calling the CDC's 1-800-number to order printed copies of information for free. The CDC also lists other flu websites that contain information on influenza (CDC, 2013g).

The MDH is a state government agency that utilizes evidence-based information that can also be accessed and downloaded at no charge. Print materials on influenza include fact sheets, flyers, signs, posters, book marks and a variety of other educational materials (MDH, 2014a). Many of these materials have been translated into languages appropriate for Ethiopian, Native American, Latino, and Somali communities (MDH,

2014b). The materials may be printed from the web site or ordered by completing an online order form that can be mailed or faxed to MDH. A 20-minute DVD, *Understanding Vaccines*, is also available at no charge in English, Spanish and Somali in unlimited quantities. Web updates and articles on a variety of influenza topics are available for health professionals and the public on the MDH web site, www.mdhflu.com.

The IAC is a non-profit organization that has its home base in Saint Paul, Minnesota. The IAC launched one of the earliest web sites devoted to immunization information in 1994 and is supported in part by a cooperative agreement from the National Center for Immunizations and Respiratory Diseases at the CDC. According to its web site, the IAC “works to increase immunization rates and prevent disease by creating and distributing educational materials for health professionals and the public that enhance the delivery of safe and effective immunization services” (IAC, 2013). Resources that are available on the web site are numerous and include published books, journal articles, Power Point slides, videos, lesson plans, interactive web sites, and more. Many of the resources are translated into Spanish and Somali, but the web site does not list availability of translated materials in Amharic or Oromo. The IAC web site also provides a directory of reliable immunization resources including government agencies, e-mail news services, hotlines, manufacturers and more. It also links to a database of local, state, regional, national and international immunization coalitions so that resources and ideas can be shared with others.

The resource list serves as an ongoing source for site contacts to find useful and meaningful information that answers questions and concerns specific to the cultural needs

of their communities. Although there are many other available resources, the benefit of utilizing information from these sites is threefold: it is evidence-based, it is continuously updated, and it provides free access to printable and translated materials. The information obtained from these sites can also be utilized to complement the one-page educational document and influenza lesson plan for in-person presentations.

Influenza Lesson Plan

The director of Education and Communication from the large health care system with which MINI partners are affiliated will be consulted to ensure thoughtful planning and consideration is given to create a lesson plan that is easy for site contacts to use and also provides appropriate information for the target audience.

The first step in creating a lesson plan is to identify objectives to be achieved as part of the education. Objectives should be limited in number and based on themes that were identified from focus group interviews. Objectives provide direction for creating an outline of topics to be covered.

An outline of topics should answer the following questions that were raised in focus group interviews: What is influenza? Who is most vulnerable to contracting it? How is it spread? How does the influenza vaccine help to prevent influenza? When is the best time to receive a vaccination against influenza? What other actions can be taken to prevent the spread of influenza? After an outline of topics is created, specific content associated with each theme can be identified.

The lesson plan should include appropriate visual tools and handouts from the influenza resource list that reinforce influenza topics covered during class. Takeaway information may also assist participants to better understand educational content that was

presented and can be shared with family or community members who are unable to attend a class. In addition to handouts, a free take home gift such as a thermometer will provide class participants with a useful tool to help assess body temperature as one distinguishing sign of influenza illness.

Finally, class participants should be encouraged to ask questions both during and at the end of the lesson so they are fully engaged and understand presented information. Questions and answers will also promote discussion among peers regarding presented information. At the conclusion of the class, attendees will be asked to complete a brief evaluation survey to assess what they learned and whether they are likely to receive an influenza vaccination as a result of presented information. They will also be informed of the dates and locations that MINI vaccination clinics will be held so they can plan to receive their vaccination and invite family and friends to join them.

Nursing Theory

Leininger's theory of Culture Care Diversity and Universality (Leininger & McFarland, 2006) has guided the development of educational and communication tools to enhance decision-making regarding influenza vaccination in four minority populations located in the Twin Cities area of Minnesota. The concepts of emic and etic (Leininger, 2006, p.13) are central to this work. According to Leininger it is "desirable to know what is universal [or common] and what is different [or diverse] among cultures with respect to care" (p.13). Focus group participants from the Ethiopian, Latino, Native American and Somali communities expressed a number of universal themes concerning questions and concerns about influenza and influenza vaccination. Similar themes explored and supported in the literature review confirm the need to develop educational and

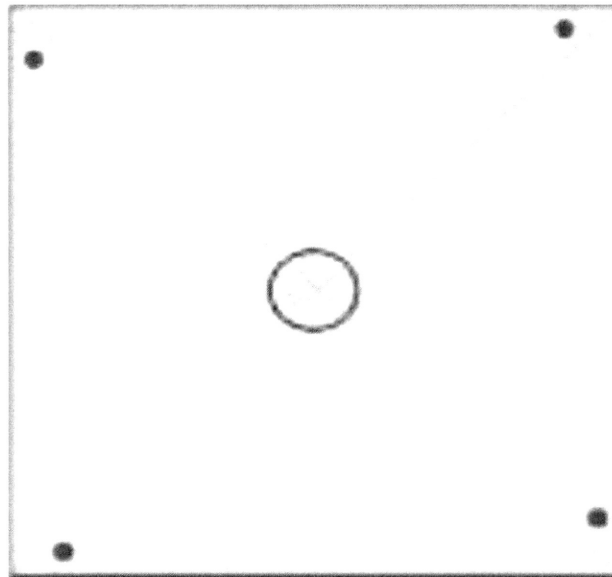
communication tools that seek to improve vaccination rates in these groups. In partnership with site contacts who understand unique language needs, religious/philosophical views, and social/kinship factors that influence perceptions of health, MINI providers can develop educational and communication tools that support preservation and maintenance of health and wellness, accommodate and negotiate practices to improve health care decisions, and restructure care approaches that drive change around the decision to receive annual influenza vaccinations.

Project Metaphor and Nursing Model

Perception of health is unique to individuals, families, and communities and is influenced by cultural and social structures that shape their worldviews. Despite varied factors that color views of health and wellness in four specific minority populations, a number of universal themes expressed similar beliefs in understanding about influenza illness and influenza vaccination. Nurses from inside and outside the Ethiopian, Latino, Native American and Somali cultures can utilize these universal themes to co-create educational and communication tools that are at the core of influencing vaccination decisions as one way of preserving and maintaining good health.

Designing and constructing a colorful pinwheel represents one way to think about influencing behavior change in four minority populations who will receive education by MINI partners and site contacts regarding influenza and annual influenza vaccinations. The blades of a pinwheel are attached in a circular direction by a pin that is anchored to a stick. They are shaped in a way to capture wind power that causes the blades to spin. Although pinwheels are designed for fun, they are based on the same principle as a windmill where rotating blades force a drive shaft that is geared mechanically to provide power (eHow, 2014).

Figure 1: Pinwheel Pattern

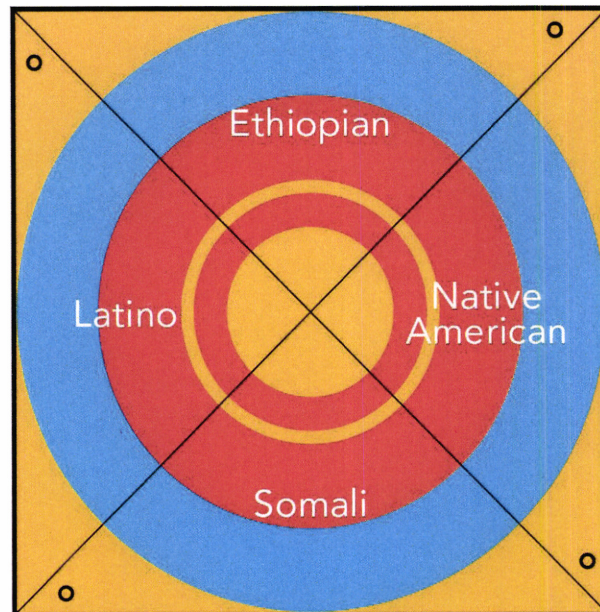


Retrieved from:

http://www.google.com/images?hl=en&q=pinwheel+pattern&sa=X&oi=image_result_group&ei=rIFQU_2gC4L4yQHVuoCYCQ&ved=0CBsQsAQ

A pinwheel pattern is comprised of four equally sized triangles that are joined together to form a square (Figure 1). Each triangle section represents a blank canvas of opportunity to educate individuals from one of four minority populations concerning influenza and influenza vaccinations. At the core of the pinwheel pattern is a circle that joins the structure firmly together representing the shared need for education. As a first step in designing the pinwheel, colorful circles should be added surrounding the inner education core to represent universal themes that emerged from Ethiopian, Latino, Native American, and Somali focus group interviews to address their questions, concerns, and educational needs. These universal themes provide information that drives the direction for development of an educational and communication toolkit (Figure 2).

Figure 2: Modified Pinwheel Pattern



Retrieved from:

http://www.google.com/images?hl=en&q=pinwheel+pattern&sa=X&oi=image_result_group&ei=rIFQU_2gC4L4yQHVuoCYCQ&ved=0CBsQsAQ

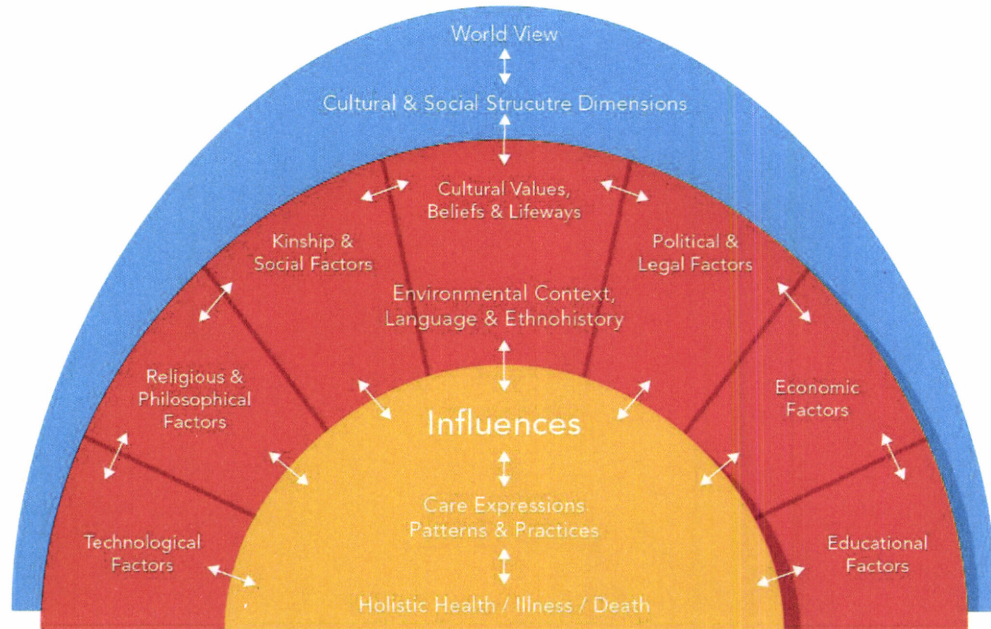
Modified by Aron Shand, sr. art director, Minneapolis, MN

The innermost red circle represents a common need to understand the difference between a bad cold and influenza and who is most at risk of suffering complications from influenza. The second red ring represents questions concerning influenza vaccine; how it works; and the efficacy, effectiveness, and safety of receiving it. The blue ring represents factors that serve as motivators and should be reinforced to enhance the decision to receive annual vaccination. Overlaying these themes is Leininger's Sunrise Enabler model (Figure 3) that guides emic and etic partners to consider important factors that influence care decisions and actions of individuals for each population being served.

Figure 3: Leininger's Sunrise Enabler

Leininger's Sunrise Enabler for the Theory of Culture Care Diveristy and Universality

Culture Care



Focus: Individuals, Families, Groups, Communities or Institutions in Diverse Life Contexts of



Transcultural Care Decisions & Actions

Culture Care Preservation/Maintenance
 Culture Care Accommodation/Negotiation
 Culture Care Repatterning?Restructuring

Culturally Congruent Care for Health, Well-being or Dying

Code ←→ (Influencers)

© M. Leininger 2002 . kj

Retrieved from:

http://www.nursing.arizona.edu/library/DeGarza_ML.pdf

Color added by Aron Shand, sr. art director, Minneapolis, MN

The metaphor of a pinwheel overlaid by the Sunrise Enabler symbolizes a creative approach for nurses from inside and outside the Ethiopian, Latino, Native American, and Somali communities to work as partners in driving change around influenza vaccination decisions. By co-creating and presenting education tools that are anchored in emic and etic partnerships, (represented by the stick of the pinwheel) it is possible to promote behavior change (motion generated by education) that moves individuals to accept influenza vaccination (Figure 4). This metaphor and model have several assumptions.

One assumption is that providing education can influence an individual's behavior to change. Offering language appropriate and culturally sensitive information may not sway deeply imbedded beliefs some individuals hold about Western medicine and the use of vaccine to prevent illness. For some, religious or philosophical beliefs regarding health, illness, and death have a strong influence on established care expressions, patterns, and practices that education will not alter.

Another assumption is that all individuals have a choice. For some, social and kinship structures may prevent personal decision-making related to health. Despite offering vaccine at no cost in a trusted setting, there may be family or community influences that prevent individuals from choosing to receive the vaccine.

Finally, there is an assumption that identified commonalities drive ones decision to receive or decline influenza vaccination. Although a number of universal themes emerged from focus group discussions regarding influenza and influenza vaccinations, there may be other factors that account for individuals' perceptions, beliefs and behaviors that were not uncovered and therefore the educational and communication toolkit does not address them.

Because influenza continues to negatively impact the health and wellness of thousands of individuals each year, it is important to attempt to influence behavior change to receive annual influenza vaccination by providing culturally appropriate education. Evaluation of the success of an educational and communication toolkit in driving change (Figure 4) will be explored in Chapter 4.

Figure 4: Education Drives Change



Retrieved from:

<http://www.freevector.com/colorful-pinwheel-graphics/>

Modified by Aron Shand, sr. art director, Minneapolis, MN

Chapter 4: Evaluation

Dossey and Keegan (2013) stated “The nurse, person, family and other members of the healthcare team all participate in the evaluation process. Together, they synthesize the data from the evaluation to identify successful repatterning behaviors toward wellness” (p.157). A number of criteria can be used to evaluate the success of using an educational and communication toolkit presented in this project to improve vaccination rates in four minority populations that MINI clinics serve. This chapter examines some of those criteria and provides an analysis and reflection of the lessons learned that may prove useful in addressing health disparities regarding influenza immunization rates in some of the state’s most vulnerable populations.

One way to measure success is to determine the impact of education on changing individuals’ vaccination decisions on those from the minority groups who attend in-person education sessions. Individuals who attend in-person sessions will be asked to complete a brief, anonymous survey to assess what they learned and whether they plan to receive an influenza vaccination as a result of information presented. In addition, it would be beneficial to have a participant discussion at the end of class to discern what information was most helpful and to make certain all questions have been answered. Surveys and discussion feedback obtained from class participants provide the most relevant and reliable information to assess educational impact, but some individuals may be unable or choose not to attend these sessions.

Individuals who do not attend in-person sessions may still benefit from receiving the one-page document and supplemental information from the resource list. MINI partners and site contacts can track numbers of information packets provided at

community sites to determine how many individuals may have received the information. By understanding how widely information is disseminated, it may be possible to estimate numbers of individuals who are reached with educational and communication messaging. Merely collecting information on numbers of educational messages dispersed has the disadvantage of not being able to assess the impact materials have in creating behavior change. An additional method of dispersing information includes e-mail, which can also provide numbers of notifications sent. Some individuals who participated in focus group interviews expressed interest in reading information from the Internet. These individuals may benefit from electronic information that can be accessed from the resource list. Individuals who receive materials by e-mail could be asked to complete a brief Likert scale questionnaire on Survey Monkey to assess their likelihood of receiving a vaccination as a result of educational information sent. This method may provide limited numbers of responses due to issues of technology access, knowledge deficit related to use of online surveys, or refusal to complete the survey.

MINI partners track numbers and demographic information of individuals who receive vaccinations at community clinic sites during each influenza season. Because each community site that conducts a MINI clinic has collected data, it is possible to compare previous years' data with the year following an educational and communication campaign. The expectation would be that MINI sites with large numbers of individuals who are reached through in-person sessions or with toolkit information by e-mail and handouts may see an increase in numbers of persons who choose to receive an influenza vaccination. An additional measure regarding educational impact could be collected from the anonymous, convenience sample surveys individuals who attend a MINI clinic

complete to determine whether they received educational information that influenced their decision to be vaccinated.

Reflection

Many factors influence individuals' decisions to receive annual influenza vaccination as a means of preserving and maintaining health and wellness. This project has examined some of the variables from a number of perspectives that include the themes gleaned from focus group interviews with four minority populations in the Twin Cities of Minnesota, barriers and facilitators highlighted in the literature review, and factors examined from the perspective of Leininger's theory of Culture Care Diversity and Universality.

The goal of improving vaccination rates through education relies heavily on a collaborative approach between partners from inside and outside each culture. Leininger emphasized this approach as necessary to integrate scientifically based information and practices with culturally sensitive and appropriate care in order to engage individuals as active decision makers in managing and maintaining their own health (Leininger, 2006). MINI partners and site contacts have built a trusted relationship over time that has allowed layered nuances specific to each culture to be more openly shared. By MINI partners being present year after year, the trusted relationship has grown and allowed them a closer inside view of important beliefs and rituals that can be integrated into care. Likewise, individuals from inside each culture are more open to receive care because they trust the shared vision of maintaining or improving health for themselves and their families. By expressing their needs, concerns, and questions about influenza vaccination, they have become active participants in their own care by creating an openness that

allows for dialogue that guides them in making informed decisions. The educational toolkit offers a clear means of influencing vaccine acceptance by providing accurate information from trusted, reliable sources.

Evidence of Success

A number of research studies present convincing evidence that indicates collaborative educational approaches can have a positive impact on influencing the decision of minority populations in urban settings to receive influenza vaccination. Nowalk et al.'s (2008) study included interventions developed with minority team input and planning that contributed to increasing vaccination rates in four racially diverse inner city clinics. Factors that contributed to their success included creating culturally appropriate interventions tailored to meet the needs of the population being served, establishing and maintaining trust among community members, and involving clinic personnel in all aspects of the project to engender ownership for improved vaccination rates and project success. Another study by Vlahov et al. (2007) identified engaging faith-based centers as collaborators because of the community's high level of trust in them. Other successful strategies Vlahov et al. identified included engaging trusted spokespeople, providing culturally appropriate education materials, and offering messages that emphasize the benefits of vaccination for others such as children and elders. These studies confirm that the educational and communication approaches proposed in this project have been successful in reaching and improving vaccination rates in urban minority populations.

By leaders from within each culture providing education based on evidence and presented in a convenient, trusted setting, it is hoped that individuals can be better

informed and that education will be the impetus to change decisions about vaccination.

This project presents one way of moving closer to the goal of eliminating health disparities in influenza immunization rates for vulnerable populations. But there is more work to be done. Chapter Five discusses conclusions, implications, and plans for the future.

Chapter Five: Conclusions

Leininger (2006) envisioned a future where culture care experts “act as *healthcare facilitators* to work with clients to transform care services to become culturally based practices” (p.393). In order to effectively address individuals’ expressed healthcare needs, she contends that there must be a shift in philosophy and practice to develop effective roles in caring for diverse cultures. This paradigm shift has become evident as MINI partners continue to nurture relationships with site contacts to uncover barriers and co-discover meaningful ways of offering preventive care such as vaccinations to individuals in their own communities. Every annual influenza season brings a new opportunity to teach and learn from each other how to best provide care that honors the unique needs of individuals from diverse cultures. These lessons will prove extremely valuable as changes in health care law through the Affordable Care Act begin to reshape the way healthcare services are offered to the newly insured. Although many individuals will benefit from expansion of healthcare coverage, there will always be a significant number who remain uninsured or without access to convenient and trusted care providers. MINI partners and site contacts must continue to collaborate in providing preventive health care services and education for the most vulnerable in these communities so they have the knowledge and resources to care for themselves, their families, and others in their communities. Effective work in the community relies on building, maintaining, and sustaining transparent, mutually respectful and honest relationships. Despite the challenges that lie ahead, it is critical that MINI honors an ongoing commitment to meet the diverse communities’ needs where trusted relationships have been forged and nurtured.

Implications

MINI's success in providing influenza education and immunizations is dependent on financial support from grants and in-kind donations from public and private sources. At a time when many of these funding sources are shrinking, the success of MINI in the community has led to requests for other preventive health services that are currently not provided such as patient education and basic screening. Needed is a collaborative and coordinated effort to secure public and private funding that underscores the benefits of offering non-traditional, community-based services valued by those they are intended to serve.

One way to ensure the continuation of financial resources to support this work is to provide data that reflects progress in addressing health disparities. MINI partners have been collecting data during each influenza season that tells a compelling story about specific populations that are reached outside the walls of a traditional medical clinic. It is only by continuing to collect, analyze, and utilize data that highlights progress in addressing and resolving disparities that collaborative partnerships such as MINI will be able to leverage the necessary resources that rest in the hands of those with political and organizational power. But financial resources are not the only challenge.

MINI partners will need to continue to engage community members at the grass-roots level to identify and develop goals that align with the concerns and needs their community expressed. From the beginning, this partnership approach has been key to ensuring active participation of community members who have previously been marginalized. Too often private and public health agencies have their own agendas based on what they perceive to be the most important health concerns of the community. But

the goals for any community program or service will only be achieved when they are based on a trusted relationship that bridges the gap between perceived and real needs.

The future of successful endeavors such as MINI relies on securing sustainable resources and growing relationships through cooperation and collaboration. It also relies on effective communication that tells a compelling story, expresses concise needs and presents clear objectives on the impact that can be made to improve the health and wellness of diverse individuals, families, and communities.

A large body of evidence addresses the prevalence and impact of influenza on the most vulnerable populations, yet the opportunity to improve vaccination rates in some minority groups continues to elude us. Houser (2012) stated, “Translation of research into practice can sound daunting, but without being put into use, research has achieved little (p. 514).” If healthcare providers are able to understand and address the barriers that prevent vulnerable populations from choosing to receive annual influenza vaccinations, they may be successful in motivating individuals, families, and communities to change their decisions and behaviors concerning vaccination. The educational and communication toolkit proposed in this project presents one opportunity to utilize the evidence toward achieving that goal. Guided by Leininger’s (1997) Theory of Culture Care Diversity and Universality, nurses from inside and outside diverse cultures can work together as partners to provide culturally congruent, meaningful and appropriate care. If successful, the potential pathway forward in addressing this health disparity presents even greater opportunities for future endeavors that improve the health of those who are served as individuals, families, and communities in Minnesota.

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Appendix A: Minnesota Immunization Networking Initiative

Minnesota Immunization Networking Initiative

MINI project has provided free vaccinations to the underserved since 2006

MINI project

In 2006-2007, a community coalition developed an initiative seeking to increase influenza immunizations among minority and uninsured populations in the greater Twin Cities area. Its success has hinged on partnering with faith-based and grass-roots community organizations. MINI has now vaccinated many underserved populations for eight influenza seasons.

The plan

Free influenza immunizations are provided in non-traditional settings, such as faith communities and community organizations. Each site assumes responsibility for promoting the free clinics and providing volunteers for intake and interpretation if needed. The MINI project provides all vaccine, licensed vaccinators and data management.

Results

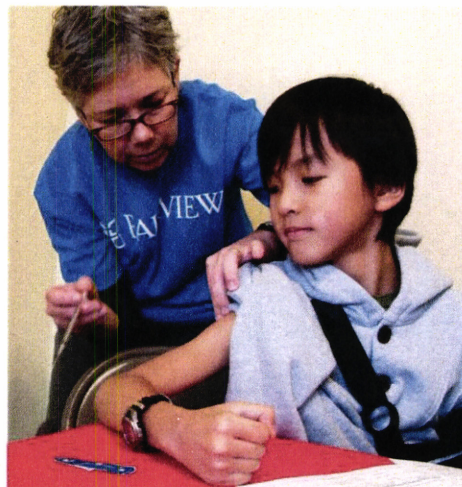
In the 2013-2014 season, 8,900 free immunizations were provided. Free influenza and pneumococcal vaccinations were provided at more than 150 multicultural settings. Since the program began in 2006, more than 52,000 free immunizations have been given.

Grants and recognition

- Grant recipient of the Eliminating Health Disparities Initiative of the Minnesota Office of Minority and Multicultural Health, 2010-2014
- Replicated nationally by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and Emory University, 2010
- Featured as a promising practice in "H1N1 Flu: A Guide for Community and Faith-Based Organizations," produced by The Center for Faith-based and Neighborhood Partnerships at the U.S. Department of Health and Human Services, September 2009
- Presented at the White House Roundtable "Community Solutions to Health Needs," October 2008

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Fairview professionals filled close to 150 volunteer vaccinator positions at MINI clinics during the 2013-2014 season.

Key partners in MINI

- Fairview Health Services
- American Indian Community Development Corporation
- Homeland Health Specialists, Inc.
- Minnesota Department of Health
- Open Cities Health Center
- River Valley Nursing Center
- St. Mary's Health Clinics
- Stairstep Foundation
- Faith-based and community organizations

MINI project administration

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Appendix B: A cold or flu: How can you tell the difference?

A cold or flu: How can you tell the difference?



SYMPTOMS	COLD (MAIN symptoms)	FLU (MAIN symptoms)
Headache	Rare	YES
Muscle/body aches	Mild possible	YES
Fever	No (rare)	YES (high; lasts 3-4 days)
Extreme tiredness	No	YES (can last 2-3 weeks)
Sore throat	YES	Yes
Chills	Mild possible	Yes
Vomiting/ diarrhea	No	Most often in children
Cough	YES (productive)	YES (dry cough)
Sneezing	YES	No
Watery eyes	Yes	No
Runny or stuffy nose	YES	Possible

Source: CDC, www.cdc.gov/flu/about/disease/index.htm