

Reducing Barriers to Covid-19 Vaccines Among Structurally Disadvantaged Populations:

The Role of Public Health Nurses in Promoting Health Equity

by

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Abstract

The Covid-19 pandemic was a global public health emergency that caused devastating impacts on healthcare systems and society (Holloway et al., 2020; Lynch, 2020; McNeely et al., 2020; Public Health Agency of Canada, 2020b; Tan et al., 2023; Ye et al., 2022). Addressing health inequities during the Covid-19 pandemic is a pressing public health priority, which can be successfully achieved with the public health sector's preparedness and capacity to implement upstream interventions tailored to specific needs of marginalized populations (Ala et al., 2021; Galaviz et al., 2020; Ismail et al., 2021; Plamondon, 2021). Research shows that national Covid-19 vaccination programs are highly effective in reducing coronavirus infection rates and populations' morbidity and mortality (Ala et al., 2021; Bambra et al., 2020; Bolcato et al., 2021; Government of Canada, 2022b; Ismail et al., 2021; Mahmood et al., 2021; Ye et al., 2022). Despite the increased availability of Covid-19 vaccines, marginalized clients still face multiple barriers to accessing them, further exacerbating their health outcomes and widening health gaps (Clarke et al., 2021; Eccleston-Turner & Upton, 2021; Gostin et al., 2020; McNeely et al., 2020; Plamondon, 2021; Ye et al., 2022).

Public health action on the pandemic has encompassed much more than a biomedical approach; the practice priorities of public health emergency response teams stem from the health equity and social justice promotion lens (Canadian Nurses Association, 2010; Lam et al., 2023; Mahmood et al., 2021; Public Health Ontario, 2020; Smith & Judd, 2020). During the unprecedented times of the Covid-19 pandemic, public health nurses (PHNs) implemented public health programs focused on tackling health inequities and restoring social justice (Hassen, 2021; Matwick et al., 2021; Yang & Mahoney, 2023). Although there is an abundance of literature on PHNs' contributions to health equity promotion prior to the global pandemic (Cohen & Marshall,

2017; Cusack et al., 2017; Dahl & Clancy, 2015; National Collaborating Centre for Determinants of Health [NCCDH], 2018; Moss & Phillips, 2020), there is currently limited literature on the role of PHNs in health equity promotion during the pandemic, specifically related to PHNs' impact on promoting equitable access to Covid-19 vaccines.

This qualitative research study explored the practice roles of PHNs during the pandemic in regard to their contribution to reducing barriers to Covid-19 vaccines and promoting health equity among equity-seeking clients. The study design was informed by Cheryl Cusack's WRHA PHN Professional Practice Model and Sally Thorne's Interpretive Description (ID), a qualitative methodology. Study findings were analyzed using content analysis.

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Dedication

This thesis is dedicated to Dr. Benita Cohen, a health equity advocate who fought tirelessly for social justice and the rights of health-seeking populations. Dr. Cohen's contribution to nursing research and practice will be forever engraved in history.

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Chapter 1: Introduction

The global spread of the novel coronavirus SARS-Cov-2 has disproportionately affected structurally disadvantaged populations, defined as “people living in densely populated areas, people with lower socio-economic status, migrants and minorities” (Alberti et al., 2020; Shadmi et al., 2020, p.1), and further exacerbated barriers to health equity (Mac-Seing et al., 2023; Public Health Agency of Canada, 2020a, 2020b). Marginalized clients have faced persistent barriers to ethical and safe care, including access to personal protective equipment and medical care as a result of poverty, social exclusion, and discrimination (Flood et al., 2020). These barriers lead to increased risks of adverse health outcomes and further amplify health gaps (Adler & Newman, 2002; Galaviz et al., 2020; World Health Organization [WHO], 2008). The concept of health equity has become especially prominent during the Covid-19 pandemic, shifting from a uniform public health approach for all populations toward a model tailored to the specific needs of structurally disadvantaged clients (Eyawo & Viens, 2020; Plamondon, 2021).

The Covid-19 pandemic has placed substantial strain on the public health system and affected its capacity to advocate for equity-seeking populations (Benjamin, 2020). Adapting to the new reality requires public health organizations to rethink their service delivery priorities to meet the complex needs of populations (Benjamin, 2020; Schiavo, 2020). Although many health client services and programs were suspended to prioritize Covid-19 cases and contact management, the public health sector continued to provide services to vulnerable clients to address health disparities (Public Health Agency of Canada, 2020a). For instance, promoting equitable access to Covid-19 vaccinations to populations who faced structural barriers was a major public health goal during the pandemic (Ismail et al., 2021; Public Health Agency of Canada, 2020a; Tan et al., 2023). Since Covid-19 vaccines have been proven to be effective

preventing the Covid-19 disease and its severe outcomes (Ala et al., 2021; Bambra et al., 2020; Bolcato et al., 2021; Government of Canada, 2022b; Ismail et al., 2021; Mahmood et al., 2021; Ye et al., 2022), reducing barriers to this imperative public health service is paramount (Bolcato et al., 2021; Castillo et al., 2021; Eccleston-Turner & Upton, 2021; Ye et al., 2022).

It is well established that vulnerable populations face barriers to accessing public health services, particularly Covid-19 vaccinations (Gostin et al., 2020; McNeely et al., 2020; Plamondon, 2021; Ye et al., 2022). However, there is a gap in the literature regarding PHNs' role in addressing these inequities. More research is needed to understand the nature of the public health interventions implemented during the pandemic to promote access to and uptake of Covid-19 vaccines among populations at risk (Castillo et al., 2021; Ismail et al., 2021).

Therefore, this study explores the role of PHNs in reducing barriers to Covid-19 vaccines among equity-seeking populations in the Winnipeg Regional Health Authority (WRHA) within the Canadian context. The choice of this study topic stems from my professional nursing interest as a public health nurse, and my passion for promoting health equity to structurally disadvantaged clients.

The rest of this chapter describes the problem statement, as well as the study purpose, objectives, and research question. I will present the background and the context of the study, the researcher's assumptions, key definitions of the main concepts, and the significance of the study to nursing practice. In chapter two, I will provide a review of the relevant literature. In chapter three, I will discuss the conceptual framework that informed this study, and finally, in chapter four, I will describe the research design and the methodology that guided the scaffolding of this study.

Problem Statement

Societal structures can put individuals at a disadvantage and amplify existing inequities that can prevent people from attaining their full health potential (Bambra et al., 2020; Jensen, 2023; Manitoba Health and Seniors Care, 2021a, 2021b). In Canada, the Covid-19 pandemic has revealed existing social inequities and has further contributed to morbidity and mortality of individuals from lower socio-economic backgrounds (Blair et al., 2021; Health Agency of Canada, 2020; Paremoer et al., 2021; Plamondon, 2021). Refugees, migrants, and representatives of ethnic backgrounds suffered significantly from depression, anxiety, isolation, and morbidity due to the pandemic restrictions (Blair et al., 2021; Clarke et al., 2021; Lee & Johnstone, 2021; Machado & Goldenberg, 2021; Purba, 2020). Due to limited access to health care services, vulnerable populations have faced barriers resulting in worsening of their mental and physical health (Benjamin et al., 2021; Blair et al., 2021; Edmonds & Flahault, 2021; Purba, 2020; Russell et al., 2021).

Access to evidence-based services, such as Covid-19 vaccinations, is paramount to population health promotion and health equity advocacy (Afifi et al., 2020; Purba, 2020). Equitable allocation and distribution of Covid-19 vaccines have been of utmost priority during the pandemic (Eccleston-Turner & Upton, 2021). It is imperative to consider the Social Determinants of Health (SDOH) and use the health equity lens when creating policies to reduce barriers to Covid-19 vaccines (Benjamin, 2020; Haworth-Brockman & Betker, 2020; Gelormino et al., 2015). The role of PHNs in facilitating access to Covid-19 vaccines needs to be further explored and communicated through nursing literature in order to establish a Canadian nursing knowledge base and inform a future public health pandemic preparedness plan.

Purpose, Objectives, and Research Question

In this study, I explored the role of PHNs in promoting health equity for structurally disadvantaged populations during the Covid-19 pandemic, particularly through nurses' professional involvement with the vaccination outreach teams established to reduce barriers to Covid-19 vaccinations among marginalized clients. The research question that guided the study was: *What is the role of PHNs in promoting equitable access to Covid-19 vaccinations among structurally disadvantaged clients during the Covid-19 pandemic?*

The objectives of the study were:

1. To identify the major challenges of structurally disadvantaged populations when accessing Covid-19 vaccines as they were identified by the FIT PHNs.
2. To determine the role of PHNs in reducing barriers accessing Covid-19 vaccines.
3. To describe the major challenges that PHNs have faced in their work addressing barriers to Covid-19 vaccines.
4. To identify lessons that can be learned from PHNs' practice that could aid in preparing for possible future public health emergencies.

Background and Context

Research shows that Black, Indigenous and People of Colour (BIPOC) had significantly higher rates of Covid-19 infection and were overrepresented in Manitoba since the beginning of the pandemic (Ahmed et al., 2021; Afifi et al., 2020; Manitoba Health and Seniors Care, 2021a). Racialized groups, including Indigenous, African, Filipino, and South Asian, had the highest rates of Covid-19 infection, estimated at fifty-one percent of the total infection rates in Manitoba (Manitoba Health and Seniors Care, 2021b). As approximately only thirty-five percent of people living in Manitoba comprised the BIPOC group, the overrepresentation of BIPOC individuals is evident (Manitoba Health and Seniors Care, 2021a). Additionally, men were more likely to acquire the Covid-19 infection due to higher rates of diabetes, smoking, and cancer (Health Agency of Canada, 2020a).

Unequal spread of the Covid-19 infection among structurally disadvantaged populations in Canada is related to economic and social disadvantages such as vicarious employment and lack of paid sick time, inadequate housing, underlying health conditions, and barriers to accessing health care services (Ahmed et al., 2021; Benjamen et al., 2021; Clarke et al., 2021; Public Health Agency of Canada, 2020; Manitoba Health and Seniors Care, 2021a). Indigenous People experienced unprecedented rates of Covid-19 infection due to poor housing conditions, poverty, poor mental and physical health, and stigma as a result of colonization and inter-generational trauma (Power et al., 2020). Additionally, due to prolonged isolation restrictions associated with the pandemic, migrants and refugees faced higher rates of relationship stress, conflict, and abuse (Benjamen et al., 2021). Similarly, temporary workers, prisoners, and migrants in detention centres have also endured hardship due to the implementation of mandatory lockdowns (Flood et al., 2020; Machado & Goldenberg, 2021). With a lack of social

and financial support, as well as immigration status insecurity, refugees were subject to unequal acquisition of the Covid-19 infection (Edmonds & Flahault, 2021).

Populations at risk also face inequities when it comes to accessing Covid-19 vaccines, a public health intervention that can provide significant protection against the Coronavirus disease (Ala et al., 2021; Bambra et al., 2020; Bolcato et al., 2021; Afifi et al., 2020). Preventable social circumstances such as homelessness, lack of transportation, and lower health literacy should not preclude individuals from accessing this service (Bolcato et al., 2021). Equitable vaccine distribution should be carefully planned by governments and public health leaders with an emphasis on social justice and health equity. A bioethical principle of justice should be a priority for public health professionals and policy analysts who are directly involved in the planning and implementation of the vaccine rollout (Babando et al., 2021; Bolcato et al., 2021; Lynch, 2020; Phelan et al., 2020).

During the Covid-19 pandemic, the Canadian government mobilized public health human resources and invested funds to respond to the increased needs of governments and communities, which included Covid-19 case management, implementation of immunization campaigns, and delivery of direct client care to community members (Rosenberg et al., 2021; Schofield et al., 2020). Since the nineteenth century, public health nurses have been historically involved in the management of disasters and outbreaks (Gebbie & Qureshi, 2006; Rebmann et al., 2008; Schofield et al., 2020). Despite the aforementioned acknowledgement, there appear to be limited studies regarding the role of PHNs in promoting equitable access to vaccines during global pandemics (Rosenberg et al., 2021). This literature gap supports the rationale for conducting this study to identify invaluable contributions of PHNs towards health equity promotion during the Covid-19 pandemic.

Assumptions Underlying the Study

This study was informed by my assumptions which were supported by the literature. These are as follows:

1. When limited resources exist, my assumption is that disadvantaged populations should be prioritized and served first (Canadian Nurses Association, 2010; Emanuel et al., 2020; Flood et al., 2020; Gostin et al., 2020; Mahmood et al., 2021; Public Health Ontario, 2020). This fundamental principle is consistent with the Canadian Charter of Rights and Freedoms and is an ethically accountable action that public health policies should reflect (Flood et al., 2020).
2. It is evident that the health inequities gap is consistently amplifying, especially during the pandemic, and vaccines are among the most important public health interventions that can be used to tackle the pandemic and prevent further exacerbation of individuals' health (Galaviz et al., 2020; Ismail et al., 2021; Afifi et al., 2020).
3. Improving access to Covid-19 vaccines can increase vaccine uptake by populations at risk and improve their health outcomes (Castillo et al., 2021; Ismail et al., 2021).
4. Access to adequate funding is key to the equitable allocation of Covid-19 vaccines (Eccleston-Turner & Upton, 2021). Therefore, an inadequate supply of Covid-19 vaccines due to limited government funding could pose significant challenges to health equity promotion efforts.

Definition of Key Concepts

The following are definitions of health equity, SDOH, the Covid-19 pandemic, public health pandemic preparedness, Covid-19 vaccines, structurally marginalized populations, PHN, and vaccine hesitancy.

Health equity. Health equity is defined as “all people can reach their full health potential without disadvantage due to social position or other socially determined circumstances, such as ability, age, culture, ethnicity, family status, gender, language, race, religion, sex, social class, or socioeconomic status” (Ministry of Health and Long-Term Care, 2018, p. 5). The Canadian Nurse Association (2010) states that “essentially, ‘equity’ is about fair shares and ‘equality’ is about equal shares” (p.12). Winnipeg Regional Health Authority (2012) emphasizes that systemic health disparities should not exist when comparing groups from socially disadvantaged backgrounds to their peers from socially advantaged backgrounds. It is important to examine the differences between the meanings of “inequity” and “inequality”, as these terms are closely associated with the concept of “health equity”. Inequity refers to the unjust treatment of socially disadvantaged populations, resulting in differences in clients’ health outcomes, whereas the term ‘inequality’ signifies an unequal distribution of health and social resources (Alberti et al., 2020; Braveman & Gruskin, 2003; Fawcett, 2019; Gelormino et al., 2015).

Social determinants of health. SDOH is a comprehensive term used to describe social and economic aspects that influence the health outcomes of populations. Consideration of SDOH is paramount when addressing inequities in vulnerable groups and lobbying for policy change (Andermann, 2016; Brassolotto et al., 2014; Breny, 2020; Community Health Nurses of Canada, 2019; Farrer et al., 2025; Lynch, 2020; Mac-Seing et al., 2023; McPherson et al., 2016). SDOH include social and economic factors, such as education, income and employment, social status,

housing conditions, genetic factors, gender, culture, racism, social support, childhood experiences, and healthcare access (Brownson et al., 2020; Government of Canada, 2019). The Charter on the SDOH also includes food security, social exclusion, and social safety nets under the SDOH umbrella (Raphael et al., 2004). Income is one of the most significant SDOH that can adversely impact clients' health outcomes; thus, providing equitable services to clients who are at risk due to low income is crucial (Benjamin, 2020; Cohen et al., 2018; Forchuk et al., 2016; Glenn & Nykiforuk, 2020; Public Health Agency of Canada, 2020a, 2020b). While some SDOH, such as ethnicity or gender, cannot be changed, other SDOH are preventable and can lead to unnecessary health inequities that can be avoided (Dover & Belon, 2019; Farrer et al., 2025; Reutter & Kushner, 2010; Tan et al., 2023).

Covid-19 pandemic. The Covid-19 outbreak is a global pandemic that emerged in Wuhan, China, in early January 2020 (Eissa, 2020; Glover et al., 2020). The Covid-19 virus, also known as Coronavirus, is caused by a highly contagious zoonosis virus that can lead to significant health complications and death (Di Toro et al., 2021; Glover et al., 2020). The Covid-19 pandemic has profoundly impacted individuals' mental, psychological, social, and financial health status (Sher, 2020). As of April 1, 2022, the total number of cases across Canada has surpassed 3,484,859 million and caused 37,626 deaths (Government of Canada, 2022a). During the Covid-19 pandemic, stress levels were significantly elevated due to financial and social difficulties, adversely affecting sleep, daily functioning, and social interactions with family and friends (Sher, 2020). In an effort to decrease infection rates, one of the interventions implemented by the Canadian government as well as countries around the world was a mandatory and prolonged lockdown that had additional devastating effects on lower socio-economic populations (Bambra et al., 2020; Machado & Goldenberg, 2021; Ndumbe-Eyoh et al.,

2021). Despite the public health efforts to mitigate the negative consequences of the pandemic, equity-seeking populations have been adversely affected (Glover et al., 2020; Ndumbe-Eyoh et al., 2021).

Public health pandemic preparedness. As a result of the Covid-19 pandemic, the Canadian healthcare system has been exposed for the lack of preparedness it demonstrates in the face of a major public health emergency (Di Ruggiero et al., 2020). The literature defines emergency preparedness as “the readiness of a political jurisdiction to react constructively to threats from the environment in a way that minimises the negative consequences of the impact on the health and safety of individuals and the integrity and functioning of physical structures and systems” (Perry & Lindell, 2003, p. 338). Emergent outbreak management can be challenging and unpredictable due to rapidly changing data and protocols (Roth et al., 2009). To decrease the morbidity and mortality of populations during public health outbreaks, healthcare systems and frontline leaders are required to incorporate their expertise and timely communication into response program planning (Roth et al., 2009).

Covid-19 vaccines. Vaccines have been shown to be highly effective against the Covid-19 virus as they provide an optimal level of protection against severe illness, hospitalization, and death as a result of the Coronavirus infection (Government of Canada, 2022b). In many established countries, such as Canada, there is no shortage of Covid-19 vaccines; however, there are still populations who face barriers to accessing vaccines due to lack of transportation, disability, low literacy level, or other structural factors (Ala et al., 2021; Anderson, 2021; Ismail et al., 2021). As of March 31, 2022, there were 97,207,360 vaccines administered in Canada to individuals ages five and older, translating to a total population coverage of 81.29% with two

doses of the Covid-19 vaccine and 47.01% of Canadians receiving three doses (Government of Canada, 2022c, 2022d).

Structurally marginalized populations. Individuals can experience vulnerability due to situational, personal, socio-economic, or political factors. Vulnerability in populations can also be due to pathogenic factors, such as structural stigma and systematic oppression by governments (Hendl et al., 2020; Sukhera et al., 2021). The latter category of marginalized individuals has significantly higher rates of experiencing poor health outcomes and barriers to health care services (Andermann, 2016; Sanders & Burnett, 2019; Sukhera et al., 2021). Inequitable opportunities caused by structural stigma, resulting from negative beliefs, attitudes, and discriminatory policies towards Indigenous and racialized populations, can lead to increased social isolation, lack of employment and income, as well as increased morbidity and mortality (Flood et al., 2020; Ho & Dascalu, 2021; Nana-Sinkam et al., 2021; Sukhera et al., 2021).

Progressive colonialism in Canada has had an immense impact on Indigenous populations' health, and it further exacerbated health inequities during the Covid-19 global pandemic (Flood et al., 2020). It is the top priority of the Canadian public health system to provide trauma-informed care to marginalized populations to decrease health gaps and mitigate health inequities (Browne et al., 2016; Flood et al., 2020).

Public health nurses. Public health is “the organized efforts of society to keep people healthy and prevent injury, illness and premature death. It is a combination of programs, services and policies that protect and promote the health of all Canadians” (Canadian Public Health Association, 2010, p.7). Public health nurses are registered nurses with a Baccalaureate degree whose practice is aimed at addressing health inequities by focusing on the SDOH and applying the health equity lens to their practice areas (Community Health Nurses of Canada, 2019;

Edmonds et al., 2020). These interventions stem from the social, biomedical, and nursing sciences, which promote and protect population health (Edmonds et al., 2020; Healey & Lesneski, 2011). PHNs view health promotion practice as a holistic approach, considering individuals' physical, psychological, and emotional aspects (Jamal, 2018; Kemppainen et al., 2013; Thornton, 2019; Young & Hayes, 2002). With the advocacy and capacity-building aim, PHNs participate in community development and empower clients to make healthy choices. PHNs possess excellent skills and knowledge to work in partnership with stakeholders and build strong relationships to promote health advocacy (Community Health Nurses Association of Canada, 2008; Community Health Nurses of Canada, 2019). PHNs are the building blocks of public health practice who foster team building and collaboration with the mutual goal of health promotion and disease prevention. PHNs respond to disease outbreaks and actively participate in the disaster response planning processes (Community Health Nurses Association of Canada, 2008; Community Health Nurses of Canada, 2019; Edmonds et al., 2020; Canadian Public Health Association, 2010; Public Health Ontario, 2020).

Vaccine Hesitancy

Vaccine hesitancy is defined as “delay in acceptance or refusal of vaccination despite [the] availability of vaccination services” (Chirico & Da Silva, 2023, p.261). Vaccine hesitancy can occur when people “lack confidence in the safety and effectiveness of the vaccine” “do not believe the vaccine-preventable disease is serious and vaccination is not necessarily required to prevent infection”, and view access to the vaccine as “inconvenient, uncomfortable or unaffordable” (Gerretsen et al., 2021, p. 2). Vaccine hesitancy can be a major barrier to achieving herd immunity during global public health emergencies. During the Covid-19 pandemic, vaccine hesitancy was more prevalent among immigrants and refugees than among

Canadian-born individuals, putting them at a higher risk for contracting the Covid-19 infection (Lin, 2022).

Significance to Nursing

Conducting this study could have clinical significance as it could delineate public health practice and reshape public health core competencies (WRHA, 2018). Examining PHN practice changes during these trying times can add to the existing body of knowledge about public health preparedness for communicable disease outbreaks, improve public health policy and sustainability, and build capacity for further research and evidence-based practice.

Understanding of PHNs' role in promoting health equity during the pandemic can contribute to excellence in nursing practice, improve client outcomes, and increase awareness about the importance of social justice and health equity action.

In addition to delivering high-quality client care, strengthening PHN practice and evaluating health promotion programs can contribute to the efficiency of public health organizations (Healey & Lesneski, 2011; WRHA, 2013). Data regarding client needs and priorities should be collected and analyzed to provide effective client services and prioritize interventions (Castillo et al., 2021; Eissa, 2020; Public Health Ontario, 2020). Comparing the PHNs' experiences working with disadvantaged populations with the relevant literature findings provides further insight into marginalized groups' health challenges. This comparison can aid in developing educational and outreach programs to support clients in making evidence-informed choices regarding their health. Evaluation of outreach initiatives to populations at-risk could identify strengths and areas for improvement and contribute to the creation of innovative community programs to improve client outcomes and promote health equity (Benjamin, 2020; Epps et al., 2021; Public Health Agency of Canada, 2020a).

Chapter Summary

In this chapter, I introduced the study topic by presenting the research problem and its context, the research questions and objectives, my assumptions, and the significance of this study to the nursing discipline. I included definitions of the key concepts to promote a greater understanding of the study context.

Chapter 2: Literature review

Search Strategy

In this literature review chapter, I aimed to synthesize theoretical and empirical evidence regarding the importance of health equity promotion, delivery of equitable public health services to disadvantaged clients, and the role of PHNs in leading outreach programs to decrease barriers to Covid-19 vaccines. The literature reviewed included peer-reviewed journal articles, books, as well as grey literature obtained from professional organizations' websites. This literature review chapter facilitates an understanding of the current knowledge, issues, and literature gaps about the study topic. The literature review informed the scaffolding of this study and will aid in analyzing and synthesizing the study findings.

The literature search was completed using PubMed, Cumulative Index for Nursing and Allied Health (CINAHL), Google Scholar, and Scopus databases. The majority of the articles used in this study were published in English from 2012 to 2024. As the Covid-19 pandemic emerged in 2020, the majority of the literature gathered about this phenomenon was published in the previous two years. However, to describe the longstanding issue of health inequities and the barriers of vulnerable populations in achieving optimal health status prior to the pandemic, reliable evidence published prior to 2012 was also used. In addition, articles and books about ID methodology considered classics are included in this literature review despite being outside of the outlined publication dates. Key words used in this search included: “public health”, “disadvantaged populations”, “disadvantaged”, “equity-seeking”, “marginalized”, “public health nurses”, “health equity”, “health promotion”, “social justice”, outreach, “health inequities”, Canada or Canadian, ethics or ethical, “targeted universalism”, “barriers, “Covid-19 vaccines”,

“pandemic”, “access”, “FIT”, and “access to vaccines”. Literature search results were reviewed, and relevant literature sources were saved on the Mendeley platform for further use.

Social Justice

The concept of health equity is linked to social justice and is a key ethical principle and a central tenet of PHN practice (Cohen & Marshall, 2017; Cohen et al., 2018; David, 2002; Dover & Belon, 2019; Matwick et al., 2021). Matwick et al. (2021) conducted a critical review of the literature and developed a conceptual framework to support social justice praxis in PHN practice. The aforementioned authors defined social justice as “the equitable distribution of societal benefits that affect health, with specific emphasis on the social determinants of health, caring relationships and health equity” (p. 4) and concluded that health equity is the outcome of social justice. Matwick et al. (2021) propose several key principles for public health practice to advance social justice and health equity. Foremost, the public health sector needs to foster a shared organizational vision for social justice and establish priorities and direction for health equity advocacy. Additionally, autonomous practice and engagement in community development, advocacy, and policy proposal initiatives could contribute to the optimal utilization of PHN expertise and support health equity initiatives (Community Health Nurses of Canada, 2019). Creating strong alliances with community stakeholders is crucial to enacting social justice and promoting health equity. PHNs who work with structurally disadvantaged clients should be provided with professional development opportunities to facilitate a greater understanding of the social justice concept. Finally, access to financial and human resources is fundamental for PHN practice and social justice advocacy (Matwick et al., 2021; NCCDH, 2013a; Public Health Ontario, 2020). Without proper support and tools, health equity advocacy may be threatened and compromised (Farrer et al., 2025; Matwick et al., 2021; Yang & Mahoney, 2023).

Targeted Universalism

Targeted universalism is a proven public health approach that “defines goals for all, identifies the obstacles faced by specific groups, and tailors strategies to address the barriers in those situations” (NCCDH, 2013b, p. 4). Using this approach, the public health sector delivers health services and health promotion programs to priority sub-groups based on eligibility criteria such as income, place of residency, lower health status, and factors such as race and ethnicity (NCCDH, 2013b). Targeted universalism is an opposite approach to upstream interventions that focus on developing policy to prevent health inequities. Targeted universalism recognizes that health inequities already exist in society and plans services to mitigate current barriers to close the health gap. For example, some targeted initiatives could include outreach activities to clients-at-risk to deliver vaccinations, test for communicable diseases, and deliver food or essential goods to clients who have barriers to accessing this service on their own. This evidence-based approach is based on rapidly changing statistical data about geographical areas with higher needs for these essential outreach activities (NCCDH, 2013b; Tan et al., 2023).

In alignment with this approach, this study explored PHNs’ practice of delivering Covid-19 vaccines through the FIT outreach program. This initiative is based on the principle of targeted universalism and has demonstrated a positive contribution to the health outcomes of disadvantaged populations (Attipoe-Dorcoo et al., 2020; Gerwing, 2021; Lam et al., 2023; Province of Manitoba, 2021a). The FIT nurses began their practice delivering Covid-19 vaccinations at the beginning of the pandemic and continued throughout its duration, shifting delivery locations based on current demands and priorities. Delivery sites included correctional facilities, emergency shelters, schools, personal care homes, and supportive housing (Province of Manitoba, 2021a). As a PHN working in the WRHA, I have personally witnessed the significant

impact of the FIT nurses' work on vulnerable community residents. Exploring this topic of interest is increasingly important to the PHN practice as the study findings could aid in learning the lessons about the FIT outreach program practice and preparing the public health sector for future communicable disease emergencies.

Ethical Implications of Health Inequities

Addressing health inequities during the Covid-19 pandemic is a major goal and moral imperative in the public health sector (Ala et al., 2021; Ismail et al., 2021; Lam et al., 2023; Public Health Agency of Canada, 2020a, 2020b). Health equity is an ethical principle and is closely associated with the Human Rights Charter, which recognizes the importance of enacting health as a basic human need, and, therefore, upholds high standards for governments to protect, promote and sustain optimal health for all (Braveman & Gruskin, 2003; Braveman et al., 2011; Cohen et al., 2018). In 1948, the Universal Declaration of Human Rights was established in Paris and stated that every individual has the right to achieve a good quality of life, maintain good health, and have access to health care services, food, and shelter. Later in 1974, the Lalonde report was released in Canada that emphasized the importance of the availability of health care and social resources to clients in order to promote their optimal health status (Fournier & Karachiwalla, 2021). The authors of the latter report concluded that the health of populations depends on the four main factors, including individuals' genetics, lifestyle choices, environment, and access to health care services. In 1978, the Declaration of Alma Ata elaborated on the definition of human rights, stating that health implies a much broader definition than simply the absence of illness and highlighted that the achievement of individuals' best possible health is a global priority (Fournier & Karachiwalla, 2021; VanderPlaat & Teles, 2005). It further highlighted that intersectoral collaboration is the key tenet of health promotion as it facilitates the

participation of community stakeholders in social and economic initiatives that are pivotal for the attainment of health equity for structurally disadvantaged community members (Baxter et al., 2024; Fournier & Karachiwalla, 2021; Hassen, 2021; Lillefjell et al., 2018).

The World Health Organization Commission on the Social Determinants of Health identified three recommendations to close the gap in a generation, improve population health and promote health equity. The recommendations were to assess the magnitude of the problem and evaluate the impact of public health actions, improve populations' daily living conditions, and tackle the inequitable distribution of money, power and resources (McLaren & Hennessy, 2020; WHO, 2008). The Commission emphasized the need for action on SDOH and the generation of new evidence about the impact of SDOH on population health. By increasing public awareness and empowering policymakers to act on SDOH, the Commission empowers governments to take responsibility and action for health equity advocacy (WHO, 2008).

Public Health Nursing Roles

There is a growing body of literature about health equity promotion being an ultimate goal of public health that can be achieved through advocacy and lobbying for policy change (Benjamin, 2020; Breny, 2020; Cohen & Marshall, 2017; Cusack et al., 2017; Dover & Belon, 2019; Lynch, 2020 Mac-Seing et al., 2023). Health equity can be achieved through the promotion of equitable access to healthcare services (Galabuzi, 2016; Tan et al., 2023) and the distribution of resources to vulnerable clients (Canadian Nurses Association, 2010; Gostin et al., 2020; Carter-Pokras et al., 2012; Afifi et al., 2020). To achieve the aforementioned goals, PHN practice involves forming alliances with non-health organizations to address health equity through the delivery of innovative initiatives at schools, community centers, and local leadership groups (Community Health Nurses of Canada, 2019; Community Health Nurses of Canada,

2019; NCCDH, 2013a). This intersectoral collaboration is crucial to PHNs' ability to set target goals and identify barriers to achieving health equity (Chircop et al., 2015; NCCDH, 2013a). Through the establishment of trusting relationships with non-health organizations, PHNs promote awareness about health inequities and strengthen accountability for further action (Community Health Nurses of Canada, 2019; Schoon & Krumwiede, 2022; Healey & Lesneski, 2011; WHO, 2008).

During the Covid-19 pandemic, PHNs excelled as the frontline responders, leading the Covid-19 cases and contact investigations and providing direct care to community members (Edmonds et al., 2020). Extant literature highlights that one of the essential roles of PHNs in the pandemic response was their active involvement and implementation of the Covid-19 mass vaccination clinics and their participation in outreach activities to deliver vaccinations to clients-at-risk (Attipoe-Dorcoo et al., 2020; Castillo et al., 2021; Dada et al., 2022; Demeke et al., 2022; Pinto et al., 2021). The literature is replete with studies which reflect that outreach is an evidence-based, proven public health strategy that helps reach out to the most vulnerable clients who would not have had an opportunity to receive Covid-19 vaccines otherwise due to the multiple structural barriers (Babando et al., 2021; Castillo et al., 2021; Lin, 2022; NCCDH, 2013b; Pinto et al., 2021; Province of Manitoba, 2021a). Outreach initiatives are managed in collaboration with health and non-health organizations and local community facilities. Delivery of public health services via this route is a flexible and efficient approach that yields results and improves client health outcomes (Attipoe-Dorcoo et al., 2020; Province of Manitoba, 2021a).

Barriers to Accessing Covid-19 Vaccines

Research shows that clients who experience physical or mental health challenges identified multiple barriers to accessing Covid-19 vaccines during the pandemic. Finding information about

vaccination eligibility as well as navigating the provincial website to book an immunization appointment presented significant barriers and discouraged people from pursuing further efforts to get vaccinated (Castillo et al., 2021; Evans et al., 2021; Ismail et al., 2021; Sebring et al., 2022; Purba, 2020). Many clients experienced physical barriers in accessing vaccination sites due to transportation and accessibility issues. In addition, long wait times in crowded areas with a lack of privacy could be anxiety-provoking for people with significant medical conditions (Abba-Aji et al., 2022; Burke et al., 2021; Castillo et al., 2021; Sebring et al., 2022). Many studies (Burke et al., 2021; Castillo et al., 2021; Chirico & Da Silva, 2023; Crawshaw et al., 2021; Dada et al., 2022; Demeke et al., 2022; Epps et al., 2021; Gerretsen et al., 2021; Lessard et al., 2022; Lin, 2022; World Health Organization, 2022) have pointed out that vaccine hesitancy as a result of mistrust in the healthcare system can pose a significant risk to Covid-19 vaccination efforts and compromise population health. Burke et al. (2021) defined vaccine hesitancy as a “delay in acceptance or refusal of vaccines despite availability of vaccination services” (p. 5116). This phenomenon stems from disinformation about the benefits and side effects of the Covid-19 vaccine, as well as the false belief that natural immunity acquired as a result of the Covid-19 disease is superior to the herd immunity achieved by massive global immunizations (Burke et al., 2021; Castillo et al., 2021; Gerretsen et al., 2021; Government of Canada, 2021; Lin, 2022).

Studies showed that Black, Indigenous, and Latin individuals were more often inclined to be vaccine hesitant than their counterparts from white or East Asian backgrounds, and they were mostly associated with a lower socio-economic class, lower educational background, and higher unemployment rates (Gerretsen et al., 2021; World Health Organization, 2022). Individuals’ vaccine preferences can be affected by misleading communication strategies used by the government, as well as misinformation delivered by unreliable sources such as social media.

Based on inaccurate and misleading information, clients often choose not to get immunized, further jeopardizing their health (Benjamin, 2020; Brownson et al., 2020; Castillo et al., 2021; Epps et al., 2021; MacDonald et al., 2021; Plamondon, 2021; World Health Organization, 2022). A survey conducted in Manitoba indicated that individuals who participated in the survey chose not to receive the Covid-19 vaccine due to concerns about having side effects or a reaction to the vaccine (18%) and possible long-term implications (25%). An additional 15% of individuals were hesitant to receive the Covid-19 vaccine as they considered it unproven and experimental (Prairie Research Association Inc, 2021; Province of Manitoba, 2021b). In addition, the availability of different vaccine brands can cause people to falsely believe that some brands are superior to others, consequently, delaying vaccinations and the achievement of herd immunity (MacDonald et al., 2021; Province of Manitoba, 2021a).

Despite the availability of Covid-19 vaccines, Southern communities and low-income urban communities had significantly lower Covid-19 immunization rates compared to other areas in Manitoba (Province of Manitoba, 2021b). In Southern Health, 18% of the population identified themselves as vaccine-hesitant, with only 40% of Steinbach and 24.9% of Winkler residents receiving at least one dose of the Covid-19 vaccine. In Winnipeg, the lowest uptake of the Covid-19 vaccine has been identified in the Point Douglas South neighbourhood, with only 41.4% of individuals immunized with at least one dose (Province of Manitoba, 2021b).

Strategies to Address Vaccine Hesitancy

Achievement of herd immunity is the single proven solution to tackle the Covid-19 pandemic (Al-Tammemi & Tarhini, 2021; Burke et al., 2021; Ghebreyesus, 2021). However, in order to accomplish this goal and deliver Covid-19 vaccines to millions of people in a timely and efficient manner, public health structures need to carefully plan and manage immunization

programs (Al-Tammemi & Tarhini, 2021; Babando et al., 2021). To effectively address vaccine hesitancy grounded in people's assumptions and cultural behaviours, public health organizations need to employ a systematic approach, taking into consideration social, economic, political, and cultural factors that play a role in vaccine hesitancy (Al-Tammemi & Tarhini, 2021; Chirico & Da Silva, 2023). Crawshaw et al., 2021; Krouse, 2020; Lessard et al., 2022). Tailored, evidence-based strategies such as educational campaigns can be effective in establishing trust with community members and delivering reliable information to promote vaccine uptake (American Psychological Association, 2020; Castillo et al., 2021; Public Health Ontario, 2020). Increasing people's knowledge about Covid-19 vaccine ingredients and mechanism of action can dispel myths about vaccine ineffectiveness and global vaccine conspiracy (Lessard et al., 2022; Mahmood et al., 2021). PHNs are the most trusted healthcare professionals; therefore, they are in a perfect position to deliver accurate, evidence-based information about the Covid-19 vaccines (Purba, 2020). PHNs need to deliver Covid-19 vaccine-related information in a culturally appropriate manner and use language that is easy to understand. It is important to validate historical racial discrimination that disadvantaged populations face and address the trauma that is contributing to the creation of system mistrust (Castillo et al., 2021; Dada et al., 2022; Lessard et al., 2022).

Outreach programs and delivery of Covid-19 vaccines to hard-to-reach clients can remove physical barriers and facilitate access to immunizations (American Psychological Association, 2020; Babando et al., 2021; Castillo et al., 2021; NCCDH, 2013b; Pinto et al., 2021). One of the central recommendations indicated in the literature was the importance of the involvement of the equity-seeking populations in the creation of policies aiming to improve equitable distribution of and access to Covid-19 vaccines (American Psychological Association, 2020; Mahmood et al.,

2021; Schiavo, 2020; Sebring et al., 2022; Plamondon, 2021). By doing so, public health agencies can empower clients and promote a sense of community engagement, trust, and mutual responsibility (Hassen, 2021; Mahmood et al., 2021; Public Health Ontario, 2020). Working alongside communities can promote creative solutions and sustain public health interventions for a longer period of time (Mahmood et al, 2021).

Chapter Summary

In this chapter, I provided a review of the literature about the significance of social justice and health equity advocacy as a strategy to promote population health and the ethical and health implications of structural barriers on disadvantaged clients. I discussed the alignment of the PHNs' practice in the WRHA sector with the targeted universalism approach and the PHNPP model. Finally, I provided information about the barriers to health equity and the Covid-19 vaccines experienced by structurally disadvantaged clients.

Chapter 3: Guiding Framework

Frameworks are structured models that can provide a guideline for the research process and aid in understanding the study phenomenon (Green, 2014; Jabareen, 2009). Qualitative frameworks provide a logical tool for analyzing and organizing research findings in relation to the relevant literature and delineating relationships between the study's key concepts and variables (Green, 2014). The WRHA PHN Professional Practice Model (PHNPP) was used in approaching this study (Cusack, 2013) (see Figure 1).

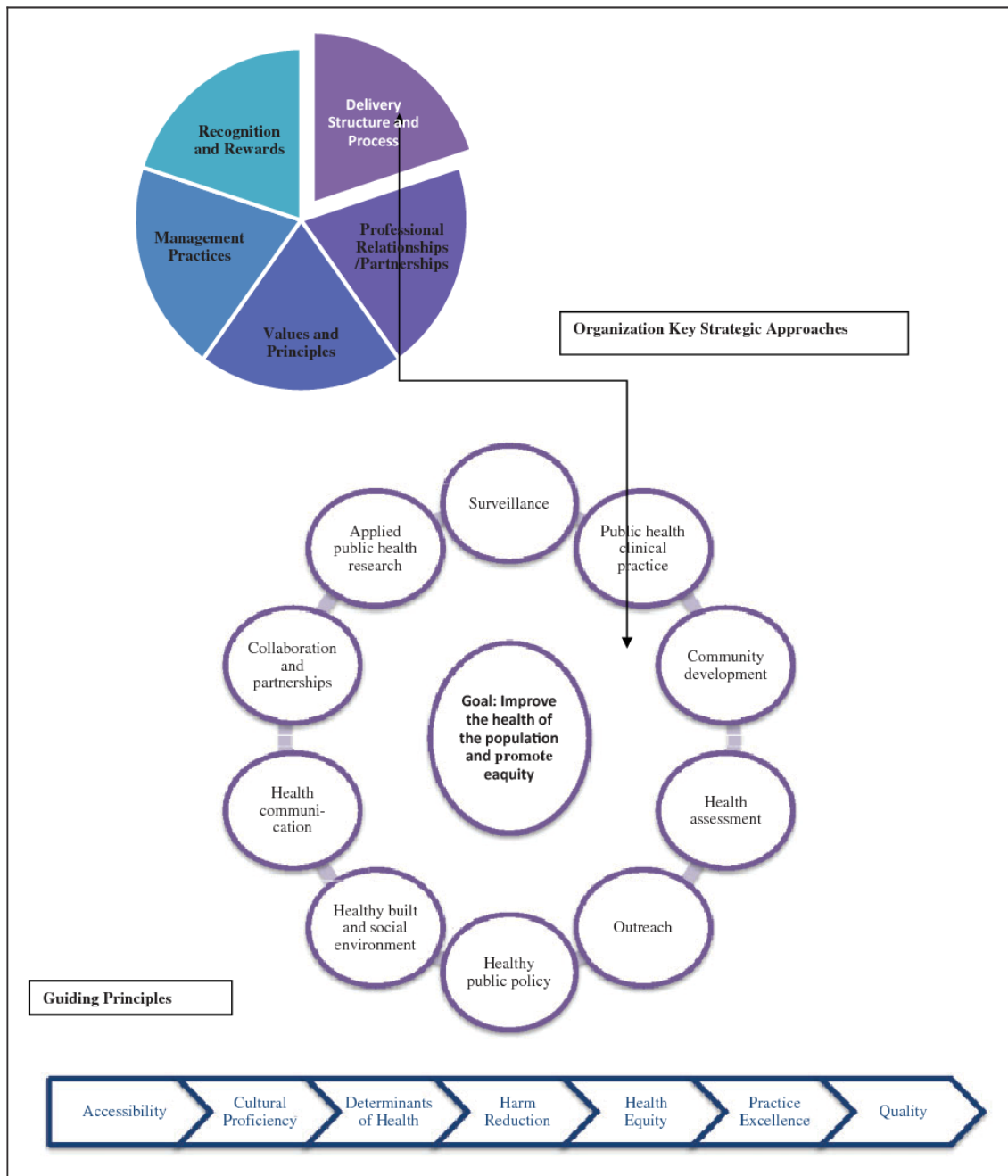
Summary of the Model

The PHNPP model was created in 2013 by Dr. Cusack as part of her doctoral work at the University of Manitoba (Cusack, 2013). The model was implemented in PHN practice in the Winnipeg Regional Health Authority (WRHA) in 2017 and is currently continues to guide their professional practice (Winnipeg Regional Health Authority, 2018). This model was the first Canadian framework that focused on establishing guidelines to improve PHN practice and organizational structures, creating system change, and delivering quality care across the continuum (Cusack et al., 2017). This model was adapted from the Community Health Nurses of Canada Professional Practice Model to meet the standards of the public health sector and reflect its current trends.

The PHNPP model is a conceptual framework that used Stringer's participatory action as a research method which included five distinct steps derived from a qualitative approach (Stringer, 2014). These steps included reading the transcripts and becoming acquainted with the model philosophy, creating the 'Look, Think, Act' cycle and collecting feedback from PHNs. It concluded with establishing the plan of action and facilitating changes in PHN practice (Cusack, Cohen, Mignone, Chartier & Lutfiyya, 2018). Developing this professional framework required

using professional nursing literature as an informative source. It also included actively engaging internal stakeholders, who provided feedback and professional perspective for the implementation of this model in the PHN practice.

Figure 1. WRHA PHN Professional Practice Model. (Cusack, 2013).



Permission to use model provided by Dr. Cheryl Cusack

Purpose of the Model

When examining theoretical frameworks, it is crucial to identify their purpose and the possibility of their utilization in practice, as this will facilitate understanding of the context and clarify the author's perspective. While some frameworks could be modified to be used in a variety of settings, such as research or practice, others have specific indications and purposes (Chinn & Kramer, 2018). Middle-range theories focus on explicit phenomena and address a narrower scope of practice than grand theories (Meleis, 2018). Congruently, the PHNPP model fits with this definition and reflects the focus of middle-range theories by aiming to improve clinical nursing practice in the public health domain. This model was created to be implemented in the PHN practice, and it has multiple explicit goals. The model offers conceptual structure and guidance for PHNs, provides clarity about their responsibilities, and promotes consistency in their scope of practice. The PHNPP model outlines PHNs' position description by stating the required education and skills, as well as their roles and responsibilities in practice.

The model also focuses on the health of individuals and groups by ensuring PHNs utilize their knowledge and skills to the full extent of their practice, thus improving their clients' outcomes and contributing to the general public's health. By meeting these goals, the model aims to improve population health, strengthen organizational structure, and create a common vision for PHN practice. The optimal goal of the PHNPP model is to “improve the health of the population within the Winnipeg Health Region and promote Health Equity” (Cusack, 2013, p. 6). In recent years, reducing health inequities has been the top priority in Canada and worldwide. Thus, PHNs are in a perfect position to act as experts and address the SDOH to meet this goal (Cusack, 2013).

Origins of the Model

Theoretical frameworks have distinct differences in their origins and epistemological nature and focus on providing direction for future nursing professional projects (Meleis, 2018). Theoretical frameworks based on empirical observations and personal perceptions of scholars combine inductive and deductive methods of research (Fawcett & DeSanto-Madeya, 2013). The PHNPP model was developed using participatory action research methodology and informed by theoretical and empirical research proposed by Falk-Rafael (2001). It placed emphasis on social justice, equity, and feminism. This conceptual model identifies the importance of client empowerment and capacity building to promote population health (WRHA, 2018). As part of the PHN practice philosophy, multidisciplinary collaboration is emphasized, along with strategic action on the SDOH for health equity promotion.

PHN is an evolving practice that requires PHNs to possess professional knowledge and skills to successfully advocate for vulnerable populations and identify innovative interventions to reduce health inequities (Community Health Nurses of Canada, 2019; Kulbok, Thatcher, Park, & Meszaros, 2012; WRHA, 2018). Consequently, the PHNPP model was developed to help PHNs align their practice with these goals (WRHA, 2018). Frameworks can encourage scholars to create grand or middle theories to explore their dynamic concepts (Fawcett & DeSanto-Madeya, 2013). Therefore, the PHNPP model can be described as an influential framework with great potential for its utility in practice and uppermost contribution to the nursing profession.

Structure of the Model

The structure of theoretical frameworks can clarify conceptual relationships and help understand their main ideas. Frameworks could be arranged into a single discerning structural form or have several possible structural forms that represent a network of relationships (Chinn & Kramer, 2018). The PHNPP model includes five components, with two of the components further subdivided into key strategic approaches that pave the way for PHNs to implement the model in their practice. The structural concepts of this model overlap and fit into more than one structural form. The concepts that represent the values and beliefs of the model have overlapping areas, where the complex relationships exist between and among them. These concepts create a common language for PHNs and guide their practice. The model's structural concepts are presented in the diagram (see Figure 1).

The five concepts of this model describe both the practical approaches to implementation of the model as well as the philosophy that underlines organizational beliefs. Some common tenets are embedded in each of these structural components, making them strongly interconnected. Moreover, each concept of the model can exist separately and be implemented in PHN practice independently. In addition, the model's concepts follow the differentiation structure, where the main concepts are subdivided into smaller principles and approaches. For instance, the concept of the delivery structure and process is further subdivided into ten strategic approaches to practice, which emphasize the means of achieving the main concept's goals. Consequently, the concept of the delivery structure and process would be implemented by engaging in a public health clinical practice, providing outreach, developing healthy public policy, creating a healthy built environment, establishing health communication, performing health assessments, developing communities, collaborating with a variety of organizations and

stakeholders, applying public health research into practice, managing surveillance practices, and acknowledging PHN professional contributions to practice.

Finally, the concepts described in the PHNPP model can also represent the polarity and continuum of structural forms due to the close associations and relationships between them. All major and sub-concepts of the model can coexist along the continuum of PHN practice and have linear relationships with each other. For instance, the model outlines the roles and responsibilities of PHNs, as well as the key approaches needed for model implementation in practice. These approaches and the PHNs' roles can be positioned along a continuum of client care as independent nursing actions or as a collective approach that will ultimately lead to better health outcomes for individuals and populations. The above structures of the model provide direction to PHNs in implementing the stated approaches and help to maintain quality relationships between and among the concepts, which are not in any specific order and can exist indefinitely.

Concepts of the Model

Concepts are integral components that indicate the purpose of the model, its usefulness in nursing practice, and the perspective of the model to be further developed as an empirical theory (Chinn & Kramer, 2018). They can be defined as “the building blocks in a discipline” (Meleis, 2018, p. 27). The PHNPP model has five major concepts: delivery structure and process, professional relationships and partnerships, values and principles, management practices, and recognition and rewards (see Figure 1). These empirical concepts serve as a ground for the model's philosophy, and they guide PHN practice to achieve the explicit goal of improving population health and promoting health equity. The concept of delivery structure and process is further subdivided into ten key strategic approaches that pave the way for PHNs to implement

the model in their practice. Similarly, the concept that describes the values and principles of the model is further subdivided into eight guiding principles such as accessibility, cultural proficiency, determinants of health, engagement, harm reduction, health equity, practice excellence, and quality.

The major concepts of the model are presented individually and arranged in a circular diagram, which represents their interrelationships and equal significance in the framework. The five key concepts of the PHNPP model can be described as qualitative, and they represent abstract values, beliefs, and approaches to PHN practice. However, some of the sub-concepts are empirically grounded and based on previous research, experiences, and testing. This mixed approach could facilitate greater success of the model implementation in practice. For instance, sub-concepts such as health assessment, applied public health research, surveillance, public health clinical practice, and healthy public policy are grounded in evidence-informed practice. Many of the concepts in the PHNPP model have similar and overlapping meanings and view the philosophical tenets of the model using a health equity lens. As an illustration, all of the concepts support an idea of optimizing the PHN practice to promote and protect population health using various theoretical approaches. These concrete concepts could imply that this model is derived from middle-range theories, making it more attainable for implementation in PHN practice. Moreover, this model has been recently integrated into the system and is being successfully utilized to guide current and future PHN practice (WRHA, 2018).

Definitions of the Concepts

The PHNPP model is comprised of five major concepts that provide strategic approaches to reorient PHN practice and create a common language and mutual organizational vision. The definitions described in this model have specific clinical features and are explicitly defined (see Table 2). The concept of ‘delivery structure and process’ focuses on planning and delivering autonomous PHN services to individuals and populations to achieve optimal client outcomes (Cusack, 2013). It is further subdivided into ten additional organizational approaches that aim to promote PHNs’ full scope of practice. With this intention, this concept reflects important trends such as changes in clients and providers, advances in medical/health care, system effectiveness and efficiency, and information technology (Cusack, 2013).

The first trend of changes in clients and providers refers to the importance of considering the SDOH of individuals when planning and delivering services to clients. It is evident, that there has been an increase in health inequities in Manitoba, especially among individuals living in poverty. Poor living conditions related to poverty can create additional health barriers and lead to increased stress, malnutrition, violence, poor mental health, a higher risk of teenage pregnancy, and exposure to environmental toxins (Adler & Newman, 2002; Galaviz et al., 2020; World Health Organization [WHO], 2008). Moreover, experiencing these deficiencies in early childhood can lead to chronic disease and negatively affect children’s cognitive and emotional development (Thornton, 2019). To address these issues, PHNs are shifting away from a population health focus to a client-oriented practice. Therefore, multisectoral collaboration among various levels of government is needed to share responsibility and address services in the core areas to redirect PHNs’ practice (Cusack, 2013).

The trend of system effectiveness and efficiency highlights the need for inter-professional collaboration and case management approaches to increase the efficacy of PHN practice in complex cases involving multiple healthcare professionals. Efficient system coordination will foster the improved ability of PHNs to utilize their competencies in addressing SDOH and implementing health promotion strategies. Lastly, the information technology trend highlights the importance of incorporating technology to collect and analyze data, as well as using it to communicate with health care professionals and the public. These technological tools include social media, evidence-informed research, and data management programs, which can significantly improve the efficiency of PHN practice and foster community development. Moreover, increasing public awareness about these technologies can aid in developing trust and preventing miscommunication (Cusack, 2013). Within the PHNPP conceptual model, the concept of professional relationships and partnerships refers to the mutual relationships that must exist between PHNs and their clients during the continuum of service provision. Additionally, PHNs must maintain positive relationships with colleagues and engage in multi-sectoral collaboration to act on the SDOH to foster equity (Cusack et al., 2018).

The concept of values and principles is a fundamental aspect of the PHNPP model and represents the collective belief system that is central to PHN practice. Thus, the PHN mission is to address the SDOH using a health equity lens, support client advocacy, and promote population health. PHNs' scope of practice also includes establishing a nursing body of knowledge and disseminating professional literature. Lastly, when practicing as self-regulated registered nurses, PHNs must abide by the regulations posed by the College of Registered Nurses of Manitoba and the Canadian Nurses Association Code of Ethics (Cusack et al., 2018).

The management and practices concept emphasizes the importance of creating organizational and management structures to avoid the autocratic hierarchal approach. It encourages focusing on a collaborative, bottom-up approach that facilitates mutual collaboration to achieve professional practice goals. Shifting away from traditional management practices to transformational leadership will facilitate shared decision-making and build trust between the frontline and executive team. Managers should provide continuous support and professional development opportunities to maintain a high level of PHNs’ competencies (Cusack et al., 2018).

Finally, the recruitment and recognition of PHNs has been the priority discussed in the recognition and rewards concept. Understanding the importance of public recognition of their practice is crucial to building PHNs’ efficacy and motivation in order to influence their professional practices. PHNs require continuous support from leadership teams that include strategies to facilitate their professional growth. Enhancing organizational capacity through efficient communication and collaboration could promote PHNs’ professional satisfaction and positive work environments to improve clinical outcomes (Cusack et al., 2018).

Table 1. Definitions of Concepts

Concept	Definition
Delivery Structure and Process	Delivery structure and process is explicitly defined as a practice that is “delivered based on structures and processes consistent with the population and public health program key strategic approaches” (Cusack et al., 2017, p. 6).
Professional Relationships and Partnerships	Professional relationships and partnerships concept is explicitly defined as a “professional relationships that are client centered, respectful, strength-based, and therapeutic. Relationships are based on PHN assessments and interventions that incorporate cultural proficiency and harm reduction, aiming to increase client engagement and access to services and resources. To

	advance client health, PHNs have professional relationships and partnerships with a wide variety of providers and agencies” (Cusack et al., 2017, p. 6).
Values and Principles	Values and principles concept is explicitly defined as the concept that “forms the collective belief system and foundation for PHN practice and professional development. The basis of PHN practice is promoting, protecting, and preserving the health of populations and facilitating equitable health outcomes by addressing the determinants of health” (Cusack et al., 2017, p. 6).
Management Practices	Management practices concept is explicitly defined as a practice that is “supported by management approaches that promote PHN input, utilizing a collaborative, strength-based approach. The role of management is to support and foster nursing excellence and practice model implementation by creating successful organizational structures and facilitating connections both horizontally and vertically in the organizational” (Cusack et al., 2017, p. 6).
Recognition and Rewards	Recognition and rewards concept is explicitly defined as “PHN practice and attributes are acknowledged by formal and informal organizational structures that create an empowering practice environment” (Cusack et al., 2017, p. 6).

Relationships Between and Among Concepts

Relationships between and among concepts are essential aspects of framework development as they assist in understanding, explaining, and predicting phenomena (Chinn & Kramer, 2018; McEwen, 2019). Relationships within frameworks can have theoretical or operational levels of abstraction and can be classified into two broad categories based on their structural and functional relationships. The first group includes associational or correlational relationships which can be described by positive, negative, or neutral correlations. In contrast, causal relationships exist when one concept causes the occurrence of another concept (McEwen, 2019).

The five major concepts described in the PHNPP model are operational at their level of abstraction. These concepts can occur at the same time, with some of them having the ability to positively correlate with other concepts. For instance, the concept of values and principles is an independent concept that guides PHN practice. At the same time, it also influences the concepts of delivery structure and management practices, therefore, providing a positive correlation between them. In turn, these two concepts positively influence the occurrence of the recognition and rewards concept, which acts as a reward system for the efficient work of PHNs.

Similarly, the concept of professional relationships and partnerships is positively correlated with the two concepts of delivery structure and management practices. Creating therapeutic relationships with clients and engaging in professional multi-sectoral collaboration will foster the occurrence of the remaining concepts. The relationships between the concepts in the PHNPP model are interrelated and predictive in nature, which contributes to understanding of the PHNs vision and formation of effective models to guide their practice.

Assumptions in the Model

Assumptions are essential foundation that underlie nursing models that can aid in understanding authors' viewpoints about phenomena (Chinn & Kramer, 2018; McEwen, 2019). Many of assumptions that underline the PHNPP model can be explicitly identified after reviewing its major concepts. Philosophical assumptions are derived from the beliefs and values that an author places within the core of the professional model. The fundamental assumptions that are central to the PHNPP model relate to clients, environments, health, and PHN professional roles and practice. The author of the PHNPP model identifies clients and their health protection as the priority of PHN practice and proposes concrete conceptual strategies as a

means of achieving this goal. These assumptions fit with the definition of value assumptions, as they denote a common understanding of what is right and wrong (Chinn & Kramer, 2018).

As PHN practice focuses on population health rather than the provision of healthcare services to individuals, it is implied that the model will use this terminology when referring to clients and their health. The factual assumptions of this professional model depict the roles and responsibilities of PHNs to promote and protect public health. Chinn and Kramer (2018) suggest that these assumptions can be developed from previous perceptual experiences that will imply the possible success and the goal attainment of the model. The PHNPP model also holds implicit assumptions that PHN practice is a complex discipline and involves a multitude of theoretical frameworks as the basis of its practice. It requires ethical considerations and professional expertise to adequately address health inequities and create organizational change.

Chapter Summary

In this chapter, I discussed the guiding framework used to frame the study. I provided a brief summary of the framework and described the purpose, structure, and origins of the PHNPP conceptual model. Additionally, I highlighted the main concepts of the framework and the relationships between and among them. Finally, I presented the assumptions that underlie the PHNPP model.

Chapter 4: Methodology, Research Design, and Methods

Methodology

Interpretive description (ID), a relatively new qualitative research design, was chosen as the methodology for this study to explore and understand the roles of PHNs in advocating for health equity during the Covid-19 pandemic in Manitoba. ID derived from a generic qualitative approach seeks to understand individuals' beliefs, attitudes, and experiences in the clinical context (Burdine et al., 2021; Teodoro et al., 2018; Thorne, 2016). Thorne et al. (2008) described the ID methodology as one that can aid in gathering, analyzing, and disseminating information about nursing clinical phenomena, that has not yet been sufficiently documented, described, or interpreted. ID is based on explicit philosophical underpinnings and draws from the researcher's experience and existing nursing knowledge of the study phenomenon (Hunt, 2009; Thorne et al., 2004; Thorne et al., 2008). ID is an inductive research tool that can help generate understanding of clinical phenomena in nursing and offer practical solutions to the problem (Thorne, 2016).

The central feature of ID is studying phenomena in context and identifying relationships and patterns between them. It views humans and their experiences with each other and the world holistically (Thorne, 2016; Thorne et al., 2004; Thorne et al., 2008). This methodology fits the study objectives because ID is derived from a constructivist epistemology that seeks to generate new knowledge relevant to the nursing context and practice (Burdine et al., 2021; Thorne, 2016). Thorne (2016) encourages readers to "lead their eventual reader toward a kind of knowing that was not possible prior to your study" (p. 181). This approach can assist researchers in collecting reliable and valid data to address the research question and generate new insight to guide future decisions pertaining to services offered to clients (Burdine et al., 2021; Thorne, 2016).

I chose this qualitative methodology because it aligns with the constructivist ontological and epistemological positions I hold (Creswell, 2013; Tracy, 2013). As a social constructivist, I strive to find the meaning of experiences and accept the complexity of views rather than focusing on one particular view about a phenomenon. In this study, my aim was to answer the research question through interaction with the study participants and explore their subjective views and experiences with the phenomenon of interest. Similar to ID, the constructivist approach is an inductive philosophy that starts with the research question and forms a theory through engagement with study informants (Creswell, 2013; Thorne et al., 2008). ID allowed me choose the most suitable way to conduct research and offered creativity in the use of data sources and inquiry approaches rather than prescribing one rigid way or philosophy (Creswell, 2013; Thorne, 2016).

ID is an iterative approach that encourages flexibility during the research process. It allows researchers to work with the data in a way that facilitates naturalistic inquiry to illuminate new knowledge relevant to the nursing discipline (Creswell, 2013; Thorne et al., 2008; Thorne, 2016). This rich and holistic methodology can facilitate the understanding of new phenomena that has not yet been adequately addressed in the contextual realm and can be further explored in a more controlled environment (Burdine et al., 2021). As Covid-19 is a novel disease that began impacting populations worldwide in early 2020, its full implications for the public health system's capacity to address health inequities are yet to be discovered (Smith & Judd, 2020).

Research Design

Situating myself within the setting. Research setting refers to the geographical, physical, or sociocultural environment where researchers conduct their studies and gather data. It plays a significant role in a study process and can have advantages, as well as challenges associated with the researcher's positionality and previous assumptions (Given, 2008; Thorne, 2016). Insider knowledge and closer access to the research site and participants are two advantages of being an insider in a research setting (Thorne, 2016). These factors can contribute to gathering rich and reliable data that will facilitate the reliability, credibility, and transferability of the study results (Teodoro et al., 2018). On the other hand, insiders can experience role confusion and face barriers, such as coworkers' rivalry and limited data availability (Morse & Field, 1995).

Setting. This study was conducted in the Population and Public Health (PPH) branch of the WRHA, Winnipeg, Manitoba. This site was selected based on its strong vision for health equity advocacy and the implementation of a regional pandemic response plan that involved PHNs' participation in the vaccine implementation task. The PPH branch provides services for clients in specialized practice areas, such as communicable disease management, health equity and mental health promotion, immunization and surveillance, and healthy sexuality and harm reduction (WRHA, 2022). It also supports clients through programs that promote healthy parenting and early childhood development, healthy children and youth, nutrition and physical activity promotion, and tobacco use reduction. The WRHA operates nine community offices in addition to its central office (WRHA, 2022). The WRHA PPH branch employs public health nurses, clinical nurse specialists, dietitians, Family First program home visitors, and other healthcare professionals working collaboratively to provide health services to clients. The FIT

team was established and operated by the WRHA prior to the Covid-19 pandemic, and its primary goal was to provide immunizations to clients unable to visit fixed clinic locations.

Sampling procedures. An appropriate and adequate sampling process in qualitative research can facilitate data richness and saturation (O'Reilly & Parker, 2012). Purposive sampling was used in this study to explore PHNs' experiences working on a FIT team (Creswell, 2013; Given, 2008; Tappen, 2016). Using purposive sampling in qualitative research helps meet the inclusion criteria and ensures study participants possess the required knowledge, education, and clinical experience (Creswell, 2013; Holloway & Wheeler, 2010; Streubert & Carpenter, 2011; Tappen, 2016). A snowball technique was also used in this study, which included participants' referrals to qualified PHNs who worked on the Covid-19 FIT outreach team (Creswell, 2013).

Sample size. Sample size in qualitative research is the number of participants selected for a study from a larger population to reflect the goals of the chosen methodology (Sandelowski, 1995). Although the ID approach involves working with a relatively small sample size (between 5 and 25 participants), it emphasizes the importance of achieving quality data with high saturation (Teodoro et al., 2018). Adequacy of sample size in qualitative research is crucial to the success of the study, as it allows for gathering sufficient quality data about participants' perspectives and experiences (O'Reilly & Parker, 2012). In this study, a sample size of 10 PHNs was used to meet the study goals of obtaining rich, holistic data (Given, 2008). In qualitative studies, the sample size is usually determined by the saturation parameter (Creswell, 2013). Ongoing reassessment of additional participants occurred during the study to ensure the achievement of maximum data saturation.

Inclusion and exclusion criteria. Through a careful and systematic selection of the sample size, the chosen sample adhered to the inclusion and exclusion criteria set for the study (Given, 2008; O'Reilly & Parker, 2012). The study participants were registered nurses who worked as public health nurses in the WRHA PPH sector. Participants must have been working during the Covid-19 pandemic full-time or part-time with the FIT team. During the pandemic, the WRHA designated an outreach FIT team consisting of PHNs to oversee the delivery of Covid-19 vaccinations to clients in various community settings, such as schools, local immunization clinics, personal care homes, shelters, and Indigenous community centres. The FIT team consisted of PHNs who were reassigned by their managers or self-referred as part of the recruiting process. PHNs who were not part of the FIT team were excluded from the study. Demographic factors, such as age, sex, or gender, were not relevant to the research question and, therefore, were not applied to this study in order to promote theoretical saturation and high variability of the data (Teodoro et al., 2018). In addition, demographic information was not gathered from study participants during the interviews because I was familiar with the nurses and could confirm their work experience and education, including multiple continuous professional development workshops in health equity. I knew that the majority of the nurses worked in the WRHA PPH branch in permanent or temporary positions from one to 25 years. Therefore, they had a relevant experience and skills in the areas of outreach and immunization.

Recruitment strategy and ethical considerations. Prior to the start of the study, ethics approval from the University of Manitoba, Research Ethics Board 1 (REB 1) (see Appendix G), as well as approval from the participating site was received. A letter explaining the objectives of the study and seeking permission to gain entry to the participating site was sent to Carolyn Perchuk, the regional director of the site (see Appendix A). Carolyn Perchuk sent invitation

letters (see Appendix B) and recruitment posters (see Appendix G) via email to PHNs inviting them to participate in virtual interviews via Zoom. The participants were informed in writing and verbally that participation in the study was strictly confidential and voluntary. Those who accepted the invitation to participate were instructed to contact me using the contact information in the invitational email.

The emails sent to the informants highlighted that there was no conflict of interest, their participation was voluntary, and they could withdraw at any time during the study. A signed written consent form was obtained from study participants before the study began (see Appendix C). Study participants were provided with information about counselling and support services if they needed them due to any stress that may be created by the interviews. Participants were invited to participate in virtual semi-structured interviews with myself, which lasted approximately one hour (interview scripts can be found in Appendix D). To encourage participation in the study, the participants were provided with an honorarium of a \$25 Starbucks gift card once they consented to participate in the study. An email thanking participants for their contribution was sent at the end of the data collection phase. A summary of the study findings was sent to study participants who indicated their interest on the consent form. Study participants were instructed not to disclose any personal information during personal interviews. During the data analysis phase, they were assigned pseudonyms that replaced their real names. Thus, a limited number of people had access to the interviews, including the principal investigator, advisor, and transcriber.

Confidentiality and anonymity in this study were assured by storing the contact information of participants in a secured, locked file. The data collected were securely stored in a locked file cabinet in the primary researcher's office. Furthermore, the data stored on the

computer were securely encrypted and protected with a password. The printed research materials will be destroyed after 7 years using a confidential shredder, and digital data will be deleted from all digital devices, including secured computer data.

Data Collection Methods

Interviews. Interviews are the most common research tools used in qualitative research due to its flexibility and accessibility (Holloway & Wheeler, 2010). By interviewing study participants, researchers can gain an in-depth understanding about the phenomenon of interest and observe the informants' body language and reactions to the questions presented (Holloway & Wheeler, 2010). Additionally, the individual interview technique has the benefit of having easier access to participants and the opportunity to conduct interviews in a private environment, where confidential and sensitive data may be shared. This approach can facilitate reflexivity in the study process and promote trust among participants. Furthermore, it facilitates some degree of freedom for both the participants and researchers and improves the quality of the data gathered (Morse & Field, 1995).

A Zoom platform was used to conduct individual semi-structured interviews with each participant, allowing for much greater flexibility and scheduling according to participants' availability (Archibald et al., 2019). A semi-structured interview guide can be used to conduct interviews in a flexible manner while maintaining rigor and addressing predetermined questions (Morse & Field, 1995). The interviews were reviewed and approved by my research advisor, Dr. Lynn Scruby, and consisted of an opening statement introducing the researcher and the purpose of the study, open-ended content questions with probes, an opportunity for comments from participants, and a closing statement. Each interview was double recorded using the recording option on the Zoom platform, as well as an audio-recorder to ensure no loss of information

occurred due to possible technical issues. Notes were also taken during the meeting to enhance the quality of the information obtained, including diagrams, key words or other significant visuals that would facilitate the retrieval of the data after transcription and coding. Interviews with participants were conducted in a respectful and ethical manner, while responses were recorded with participants' permission for further coding and content analysis. The primary researcher was available for follow-up or further clarification as needed by providing participants with the researcher's contact information (Creswell, 2013; Polit & Beck, 2017).

Field notes. Field notes are an essential tool that allows researchers to jot down important observations, the researcher's feelings, participants' reactions to questions, or group dynamics (Liamputtong, 2013; Polit & Beck, 2017). Field notes can aid in identifying relationships within the data and be used to identify themes during data analysis (Phillippi & Lauderdale, 2018; Polit & Beck, 2017). Descriptive field notes were recorded during the interviews to include objective factors such as the date and location of the event, the number of participants, and other content of the interviews, such as the use of key words, phrases that stand out, or informants' questions or concerns. In addition, field notes were taken to document any biases or assumptions that arose during the interview, which helped later reflect on the researcher's subjective attitudes toward the phenomenon of interest. Reflexivity is an important aspect of qualitative research as it helps the researcher promote self-awareness and identify their values, beliefs, biases, strengths, and weaknesses (Creswell, 2013).

Data Analysis

The Coding Process. The coding process serves as "an organized platform for the construction of meaning," therefore, the identified categories and themes are crucial to knowledge formation about the researched topic and its relevance to scholarly literature

(Williams & Moser, 2019, p. 45). The coding process contributed to the trustworthiness of the study by achieving transparency and effectively linking the study findings to the literature. It also enhanced the validity of the study by confirming the alignment between the research questions and the conclusions (Connelly, 2016; Linneberg & Korsgaard, 2019). In addition to revealing the significance and essence of the phenomenon, the rich and detailed findings enhanced the study's authenticity (Connelly, 2016).

Using non-linear coding methods comprised open, axial, and selective cycling techniques, the coding process identified, analyzed, and reduced data using the three steps of non-linear coding. Connecting the data with the literature is a crucial step in engaging meaningfully with the data (Williams & Moser, 2019). To produce the final data report, the latent content analysis involved familiarizing myself with the transcripts, identifying codes and categories, searching and analyzing the themes, and linking them to literature. The initial reading cycle of the interview scripts yielded findings that are particularly detailed at their interpretive level (Braun & Clarke, 2006). In this process, a preliminary jotting method was utilized to identify preliminary codes, which were later organized into final codes. Following these coding steps, the codes were clustered into categories that further identified themes.

Identification of categories. The process of category identification included clustering the codes into categories with similar characteristics and meanings (Morse, 2008). These categories represent the reality of the data and “how the themes and concepts systematically interrelate lead toward the development of theory” (Saldaña, 2009, p. 11). The formed categories exemplified the main concepts of the study results and helped to identify the major themes of the study. These categories represent the essence of the data set and aid in answering the research question posed at the beginning of the study. Identifying categories and themes is crucial to the

data analysis process as they reflect the researcher's ontological and epistemological stance (Mason, 2018).

Identification of Themes. The data analysis phase begins after researchers achieve data saturation that is defined in qualitative research as “the point at which no new information is obtained and redundancy is achieved” (Polit and Beck, 2017, p. 321). In this study, content analysis was used to analyze the data collected through open-ended interviews with 10 study participants. I determined that I achieved data saturation as nurses provided enough information in order to draw necessary conclusions about the study phenomenon and the data collected became repetitive. Content analysis is a method to examine critical data and obtain rich, in-depth information and understanding of participants' experiences with the phenomenon under study (Krippendorff, 2022). The goal of the content analysis is to answer practical questions rather than generate new theories. In content analysis, the interpretation of study findings is based on the context and subjective experiences of readers; therefore, data can evoke different meanings and interpretations (Hsieh & Shannon, 2005; Krippendorff, 2022).

A conventional content analysis aims to describe studied phenomena with limited research literature exists (Hsieh & Shannon, 2005). This approach involves the researcher's immersion into the data and extraction of categories that freely emerge from the data (Hsieh & Shannon, 2005). Content analysis comprises three main phases that include immersion, reduction, and interpretation (Hsieh & Shannon, 2005; Krippendorff, 2022). The analysis process consisted of reading the data and highlighting key words and sentences, collapsing key concepts into codes, which later formed categories and themes (Hsieh & Shannon, 2005). Conducting a content analysis allowed for capturing and interpreting PHNs' experiences in a clear and logical manner, focusing on significant phrases and meanings (Braun & Clarke, 2006).

Once I had completed the coding process, I organized the codes into themes, using the color-coding system. After I identified the major themes, my advisor and I met several times to discuss these findings and developed five sections with the 11 major themes that were organized to summarize the study findings conceptually. Finally, the five sections and 11 themes were arranged visually to facilitate viewers' understanding of the themes (see Table 2 in Chapter 5).

Study Trustworthiness

Trustworthiness in qualitative research is the “degree of confidence in data, interpretation, and methods used to ensure the quality of a study” (Connelly, 2016, p. 435). This study was evaluated by the four trustworthiness criteria established by Lincoln and Guba (1985) and vastly used to appraise qualitative studies (Connelly, 2016; Polit & Beck, 2017). These criteria are credibility, dependability, confirmability, and transferability (Connelly, 2016; Polit & Beck, 2017). As the concept of “rigour” is more associated with quantitative research and could lead to inflexibility in studies, trustworthiness serves as a better measure of rigour, reliability, and validity in qualitative research (Holloway & Wheeler, 2010; Tappen, 2016). Qualitative researchers are encouraged to create “evocative, true-to-life and meaningful portraits, stories and landscapes of human experience” and avoid having rigid approaches that could hinder creativity and artistry (Holloway & Wheeler, 2010, p. 298).

Credibility. Theme verification or member checking is one of the methods to ensure credibility and avoid researcher bias (Birt et al., 2016; Holloway & Wheeler, 2010). In this study, the interested participants were contacted by email to verify the study themes that emerged during the data analysis phase. Participants were asked to confirm that the study findings represent their responses to the semi-structured interviews. Participants were informed that they could contact me if they had any questions. In addition, to ensure the credibility of the study,

field notes were maintained to document my thoughts and biases during the study process, which were shared during our meetings with my advisor, Dr. Scruby.

Dependability. Dependability refers to study findings that are consistent, accurate, and stable over time; if a study is repeated, researchers are likely reach similar conclusions (Connelly, 2016; Holloway & Wheeler, 2010; Tappen, 2016). To meet this criterion, an audit trail was maintained to demonstrate the researcher's thought process. It includes raw data such as data analysis and synthesis, semi-structured interview guides, and digital recordings (Holloway & Wheeler, 2010; Polit & Beck, 2017).

Confirmability. Confirmability in qualitative research is achieved by obtaining objective findings that are consistent and can be traced to their original sources in the data collection and analysis process (Connelly, 2016; Tappen, 2016). In this study, a detailed log of decisions made during the research process was maintained to ensure they free from biases and prejudices (Connelly, 2016). Additionally, I discussed my data collection and interpretation at regular intervals with my thesis advisor, Dr. Scruby, who provided guidance and supervision throughout the study.

Transferability. Transferability means that the study findings could be applied to other studies with similar contexts or participants (Connelly, 2016; Polit & Beck, 2017). Transferability was attained by maintaining a detailed description of the study design, including the context of the study and key informants, as well as the decisions were made in the research process (Polit & Beck, 2017). Providing a clear, in-depth description of the study process will inform readers whether the study findings are applicable to other similar settings and groups (Connelly, 2016; Polit & Beck, 2017; Tappen, 2016).

Chapter Summary

In this section, I described the research design, setting, and sample that was utilized in the study. I also presented the methods and instruments that were used to promote study trustworthiness. Finally, I discussed the data collection phase and data analysis process that concluded the study.

Chapter 5: Study Findings

In chapter five, I present the findings of this research study. The purpose of this qualitative study was to examine the roles of PHNs in promoting health equity for structurally disadvantaged clients during the Covid-19 pandemic, particularly through their professional involvement with FIT teams. The research question that guided the study was: *During the Covid-19 pandemic, what role did PHNs play in promoting equitable access to Covid-19 vaccinations among structurally disadvantaged clients?*

The data were collected through face-to-face and audio-taped online interviews with 10 PHNs who worked on the FIT team during the Covid-19 pandemic. No demographic data of nurses were collected due to my insider positionality. This is further reviewed in the discussion chapter. The interviews were transcribed verbatim and analyzed using the process of content analysis. Pseudonyms were assigned to each participant to maintain participants' confidentiality. Similar codes were extracted from the transcripts, grouped into categories, and themes were derived. During this process, 11 major themes were identified and categorized into five sections (See table 2 below): Clients experience barriers to vaccines, PHNs addressing barriers to vaccines, Making a difference, PHN's experience practice challenges, and Lessons learned for the next pandemic.

Table 2: Summary of Sections and Themes

Section 1	Section 2	Section 3	Section 4	Section 5
<i>Clients experience barriers to vaccines</i>	<i>PHNs addressing barriers to vaccines</i>	<i>Making a difference</i>	<i>PHN's experience practice challenges</i>	<i>Lessons learned for the next pandemic</i>
Theme 1: Clients barriers to vaccines	Theme 1: Different locations of FIT clinics	Theme 1: Interdisciplinary team collaboration	Theme 1: PHNs' challenges to remove barriers	Theme 1: The meaning of working with clients

	Theme 2: PHNs addressing clients' barriers to vaccines	Theme 2: Holistic care Theme 3: Meeting people where they are at	Theme 2: Trying times Theme 3: Lack of consultation with PHNs	Theme 2: Public health preparedness for the pandemic
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Section 1: Clients Experience Barriers to Vaccines

Theme 1 - Clients' barriers to vaccines

One of the major themes apparent in most of the interviews was clients' barriers to vaccines. Exploring this theme is fundamental to gaining a deeper understanding of the study phenomenon because it reveals important information about clients' needs and helps determine the scope of the problem. In response to the question about the barriers that structurally disadvantaged clients faced when accessing Covid-19 vaccines during the Covid-19 pandemic, the majority of the nurses pointed out that the most crucial barriers were transportation, language, low literacy, mistrust in the healthcare system, previous trauma from seeking medical care, and perceived judgement from healthcare providers. Nurse Jamie discussed the various circumstances that could prevent clients from physically accessing mass immunization sites in different areas of Winnipeg.

With any determinants of health, if they didn't have access to transportation, those who may not be employed, not have money, homeless, the elderly, even the children. If you had language barriers and you are a newcomer, you have literacy issues, then that could definitely be a major barrier.

Most participants stated that clients faced significant physical barriers in accessing Covid-19 vaccines. Several nurses discussed them through a health equity lens, stating that social determinants of health (SDOH) can present physical barriers to clients. Other participants

suggested that clients with medical conditions that affect their mobility or cognition may find it difficult to access immunization supersites. Because of the limitations associated with cancer and dialysis treatments, Sarah explained that clients with these diagnoses often faced physical barriers:

Physical barriers, not being able to walk very far. They may not be in wheelchairs, but they can't walk long distances. So that was a barrier. Or being in wheelchairs with a walker. Some people were bedridden. And some people just had different other chronic health conditions. Going through different treatments, dialysis patients, oncology patients, things like that. We had people, amputees, maybe they didn't have an arm and the other arm maybe wasn't accessible, so then we would give in the leg, maybe post breast cancer treatment.

Additionally, Jamie stated that transportation and difficulty taking time off work were among the physical barriers that clients faced when attending Covid-19 immunization appointments for themselves or their children:

So, barriers to transportation for parents to actually physically leave work or be able to bring children to immunization clinics because they're structurally disadvantaged. They are not able to go to other sites such as supersites, or doctor's appointments or pharmacies.

Jenna stated that displaced clients living in encampment areas also faced transportation challenges because they lived in remote areas and did not have access to public or private transportation:

I think for us, transportation was also an issue. The site I was at, we did see a lot of people from encampment areas come in who didn't travel. So, it was really good that way. So, distance was definitely bad.

Additionally, three nurses (Angela, Sarah, and Jenna) stated that mistrust in the healthcare system and the belief in conspiracy theories were significant barriers for some clients. Study participants believed that the government forced them to get vaccinated against their will because Covid-19 vaccinations were mandatory. Angela stated that *“One of the barriers would be individuals that thought this was a conspiracy theory. They were dead set against it and like all you could do was respect their decision and move on.”* This quote suggests clients' disbelief in the healthcare system and their unwillingness to receive the Covid-19 vaccine.

Sarah reported that some clients were unsure about the effectiveness of the Covid-19 vaccine due to their low literacy levels and previous history of vaccination side effects, and unsure whether to pursue it. To make an informed decision, clients expressed that they needed more information about the new vaccine due to misconceptions about its safety:

The trust wasn't there. The trust in the healthcare system, not just because of Covid, but just in general. There wasn't trust, so trying to work as best you could with that. Couldn't coerce people, it had to be an educated decision to get the vaccine.

Nurse Jenna supported this claim and highlighted that *“mistrust from previous history, feeling the forced vaccinations and the uncertainty of the vaccine need”* were among clients' concerns about the potential benefits and risks of the Covid-19 vaccine. Jenna said that she was *“meeting with people where they were at and doing the education with them about what we're doing and why we're doing it”*.

Section 2: PHNs Addressing Barriers to Vaccines

Theme 1 - Different locations of FIT clinics

During the Covid-19 pandemic immunization period, the mobile van FIT clinics were stationed at various locations in Winnipeg. The two main types of FIT clinics were mobile van clinics and clinics at fixed locations. The mobile van clinics were driven to various locations within Winnipeg where nurses immunized individuals without a permanent residence or an appointment. Depending on the location, clients could walk in or schedule an appointment for immunizations. The locations were chosen strategically to reach different populations and meet their unique needs. Each immunization clinic required FIT nurses to relocate to a different area, and sometimes they moved several times a day. The nurse participants unanimously acknowledged that the outreach approach was beneficial because it helped reach clients who might not have been able to receive immunizations otherwise due to barriers, such as immobility, medical conditions, transportation, low literacy levels, a lack of identification documents, or stigma associated with substance abuse. Karen shared her experience regarding the operation of mobile FIT clinics:

The FIT van is a standalone clinic that can move from place to place. There we would go all over the city where people were underhoused and living under bridges. Sometimes we would stop at many places in a day. So you would go under all of the bridges, and then you would go to a shelter, and then you would go to downtown.

Angela noted a similar experience, describing that the mobile van drove to meet people in “community areas where Manitoba housing was, [in] community centers, parks, and [at] rinks”.

Jamie described her experience working at FIT immunization sites, some of which were set up as a temporary location, while others were set up for a prolonged period of time:

We had a lot of different places pretty much everywhere and anywhere you can think of. FIT clinics were organized and were offered and continued to in certain places such as Manitoba housing complexes, community resource centers, community centers, parks, access centers, personal care centres, assisted living, hospitals. We even had gone to dialysis units from what I can recall, jails, even the evacuee site.

According to Susan, personal care homes were among the first locations for FIT immunization clinics. Since older people and those with comorbidities were considered the most vulnerable clients to receive Covid-19 immunizations, most FIT nurses started immunizing at those clinics before moving to others.

Other places that were good at serving or giving the vaccines to the people that were most in need. For example, the personal care homes and the assisted living facilities, we were able to target that population in a very convenient way for them so that people at the PCH and in an assisted living were able to get their vaccines in a timely manner.

Schools were additional major locations of the FIT clinics' operation. Nurse Susan stated that immunizing children at schools was a beneficial strategy because children could rapidly transmit the Covid-19 infection to their family members who might have been immunocompromised, and therefore, at a higher risk of severe morbidity and mortality. Parents who couldn't schedule or attend appointments during the day or who didn't have transportation to clinics or supersites often had difficulty getting their children Covid-19 vaccines. According to Susan, *"FIT nurses offered vaccines at every school in the city. If parents signed a consent form, they could have their children immunized during school hours"*.

Theme 2 - PHNs addressing clients' barriers to Covid-19 vaccines

This theme relates to PHNs' strategies for addressing clients' barriers to Covid-19 vaccinations. This theme highlights nurses' work as a team to overcome barriers and ensure their clients had access to vaccines. As previously mentioned, transportation was a significant barrier to Covid-19 vaccinations among vulnerable clients. Due to physical or mental disabilities, living in remote areas where public transportation is unavailable, or not being able to access immunization sites without parental or guardian permission, most clients encountered transportation barriers. Based on the interviews with nurse Stephanie, FIT clinics played a significant role in reducing transportation barriers for clients by being mobile and accessible.

I feel like we were able to address, myself as well as our entire team, some of the barriers. Of course, I'm not sure we were able to do all of them. But with the mobile van, we actually went to the community areas. Decreasing the transportation piece, being visible in our community. If you wake up and you see an opportunity across the street to get an immunization, chances are higher that you might do that.

Similarly, Susan stated that clinics welcomed their clients regardless of their appearance, age, or use of illegal substances. The clinics provided a non-judgmental environment where clients were welcome, and no questions were asked.

Simply having our van be mobile and going to different areas in the community, I think was addressing the barrier around transportation. Having our clinic structured so people could access vaccines, when they don't have to have a shirt to come and see us. They can be barefoot and come to our clinic. If they admit to using substance or alcohol, as long as they were able to give consent, we would offer vaccines.

During the interviews, many nurses expressed concerns about structurally disadvantaged clients lacked identification documents, preventing them from attending mass immunization clinics. FIT nurses were able to overcome this barrier by confirming their identity at primary clinics or using legal documentation that was not accepted at supersites. According to Nurse Jessica, this approach removed vulnerable clients' barriers to vaccines through creativity, patience, and collaboration with other community agencies:

We were able to immunize people because a lot of the disadvantaged population didn't have ID with them, they didn't have their health cards with them. So, we were still able to immunize them even without it. If they were to attend a supersite, they wouldn't have been immunized. But we were able to do that even without that documentation. We're still able to access them through their names on PHIMS anyways. I just thought that we were a bit more flexible in that way. We were able to immunize more people than if they were to go to the super site, if that was the only place that they're able to go.

Most participants reported that FIT nurses have made a significant contribution to schools. Children and their parents who attended the clinic with them were immunized using this strategy. Using this family-friendly, "all-in-one approach" was imperative to achieve herd immunity. Melanie noted FIT nurses established trust and provided community members with evidence-based information at an easy-to-understand literacy level.

The schools were often times, there was multiple generations that were getting vaccinated. So that felt like that was reducing barrier, that barrier for that family, if they were able to bring grandparents, parents, or their siblings or their schools, that was a positive, decreasing barriers for specific families. And often times families were so relieved to have been able to connect with a nurse to get the Covid vaccine. Often times,

there was multiple children involved and parents, and there was a lot of relief that they were able to do that for their family.

Several participants reported that some of the families with language barriers were unable to fill out consent forms or schedule online appointments at the mass immunization sites. Therefore, schools were an alternative vaccination site where multiple generations could receive the Covid-19 vaccine. Sarah described her experiences managing clinics at schools and how they provided to families and children with invaluable benefits at these settings:

For schools, it was great for a lot of parents that are working or not working or just don't have the ability, bus transportation to get to a doctor or don't have a doctor. So that was helpful going into the schools and then we had the e-consent where they could fill the consent through the computer system. And then we also had clinics that ran like 3:30 pm to 6:30 pm. So parents that are picking up their kids could come right after school and then be there and that for some kids needed that right to have their parents with them and they felt more comfortable and they can answer more questions, ask more questions that we could answer. So that was helpful. So that makes it easier for parents that are working or maybe their partners working, and they want to all go together.

The FIT clinics were community-oriented, where clients could drop in to receive information, referrals, and therapeutic listening services. During clinic operations, nurses often provided food, coupons, and clothing as complementary items. Although the primary purpose of the clinics was to provide Covid-19 vaccines, PHNs often provided information using their information resource binders and referred clients to services as needed. Jessica emphasized the importance of providing her clients with evidence-based information regarding Covid-19 vaccines and other public health services:

When the community members were there during barbecues, providing sandwiches, it really got a lot of people through the doors to get immunized. Just being available to answer any questions or concerns that the clients had regarding the vaccines. Using those evidence-based responses to correct any of that misinformation was helpful. I always like to have my binder with me at all my clinics so I always had that information that I can refer to and point out to individuals because it was all evidence based.

In addition, Sarah suggested that FIT clinics provided privacy and personal space to clients who required special physical accommodations due to anxiety or physical limitations:

A lot of private space. I know one of the community sites that we were at, we would have barriers up and they could go behind barriers that were separated from everybody else. So that was helpful. Some people need to be lying down because they would faint with immunization, so just helping them with that.

Section 3: Making a Difference

Theme 1 - Interdisciplinary team collaboration

The FIT nurses identified interdisciplinary team collaboration as a vital component of public health that integrated professionals from various fields. Each team member shared their knowledge and expertise and worked together to deliver the best possible care to their clients.

At her FIT clinic, Stephanie described her experiences working with a variety of team members from different backgrounds:

A variety of professional backgrounds, clinical and non-clinical staff. And sometimes we worked with outreach staff from a variety of organizations. So working with all of them to make sure that the clinic was going well. And in some instances, on some of the FIT

clinics, especially with the Project van we worked with a variety of other providers like physicians, Indigenous nurses that were able to do some primary care at the same time.

Most nurses agreed that building trust and connection within teams was crucial for creating effective and cohesive teams. During challenging times, Angela emphasized the importance of team members supporting one another to improve team unity and productivity:

It's just that whole team building and to have that real connection to when there's such intense work, it's important to take that positive energy out to the clients. But I think also to have that trust and connection, you initially have to start with your team. And if you don't have a good connected team, you're not going to be able to promote that trust and connection. It starts with the team to have trust amongst their members, to pass that sense or that feeling down to the clients. At one of the community immunizations sites, they always started the day in a circle where we would smudge and then the site lead would mention something about the day.

Furthermore, interdisciplinary work facilitates connecting with others and establishing a sense of belonging within a community. Sarah provided insightful feedback on how FIT nurses could engage various community stakeholders and strengthen their relationships with community agencies, WRHA, and Shared Health:

I think the partnerships that were established are really good for our population, I really think that there's been a lot of great strengths in those relationship building. I think there's been some trust made with Shared Health, WRHA and the non-profit community sites that we were able to assist with, so I'm impressed with that.

Furthermore, Sarah also emphasized that teamwork was key to achieving 80 percent immunization rates for the target population:

We were trying to achieve herd immunity, that's what made sense in the beginning. But we knew that to get to 80 percent you need to do just more than that. The rewarding part is just to see how it rolled out and there was collaboration between all the community groups. I was quite impressed with that. So many partnerships.

Study findings indicated that interdisciplinary team members were an essential resource for FIT nurses and community members. For instance, outreach workers were familiar with the neighbourhoods their resources, as well as with many community members with whom they had previously established trust and connections. According to Jenna, this collaboration helped build trust between FIT nurses and clients, and reduce anxiety associated with vaccinations:

I think working with a team with the workers who already knew the area and knew their clients. I think people realized it was a safe, open place to come and they could trust us. And its amazing what people would share you know. And treating people the way you want to be treated, and you treat everybody the same. I think having that teamwork made a big difference, that people felt comfortable and they could share their stories. You met them exactly where they were at, trying to help them meet their other needs, like for hunger.

Theme 2 - Holistic care

The second theme in this section focuses on the holistic care clients receive when seeking Covid-19 vaccinations. FIT nurses addressed clients' physical, mental, emotional, and spiritual needs using a holistic, empathetic, and culturally appropriate approach. They treated clients with respect validating their feelings. Nurse Jessica recognized that a non-judgemental approach helped them build trust with clients in the community:

I also felt like we were very non-judgmental. So, we were never forcing anybody, if people weren't comfortable getting that immunization that day, it was fine, no problem. Come back when you're ready. I feel like that helped to establish that trust and that relationship with people too. Just answering any questions that they had, and acknowledging their feelings. Kind of empathy was huge rather than being frustrated back at them. Because some came in and they were quite angry at you but just respecting their choices and understanding that.

Lorna recognized that clinics had better vaccine uptake if clients when they also offered other free things “*Like some food or some health kits or different kind of things which came from their community partners*”. She additionally mentioned that nurses accommodated clients’ unique needs and physical limitations whenever possible. As an example, Lorna described how she was able to immunize someone who had a walker and could not use stairs to access the clinic: “*I just said, Oh, no. You just stay up there and we will come up*”.

During the interview, nurses emphasized the importance of respecting clients and giving them as much time as they needed. According to nurses, clients who mistrusted medical professionals responded well to strategies, such as introducing themselves and making eye contact. Similarly, nurse Sarah described some of the strategies she used to establish therapeutic relationships with their clients, such as being friendly, wearing casual clothes rather than a white coat, and using non-verbal communication to convey patience and support:

You're dressing to meet people where they're at and making them feel comfortable and just non-verbal, that could be just a smile and just sitting down. And be comfortable and sometimes they were scared and just before we even start looking at the paper let's have a conversation about what's going to happen, and a lot of that was with children.

Children were often scared and saying this is what's going to happen and walk them through it to get those fears down and then being a good listener, validating their feelings, saying, you know what is going to hurt a little bit and being honest. And then looking at the bigger picture of why it's helpful that they're being immunized.

Using the holistic approach, nurses promoted their clients' health by considering their emotional, mental, spiritual, and physical needs. Although the goal of FIT clinics was to provide Covid-19 vaccines to achieve herd immunity, PHNs also addressed additional client needs if they arose. For instance, PHNs helped their clients find a doctor or a primary care provider, linked them with community resources, such as food banks and/or addiction treatment programs, provided basic wound care, or referred them to health care providers or antenatal PHNs. All 10 participants indicated that their holistic approach had a positive impact on the care they provided to clients and helped establish connections with them. As Susan demonstrated in the following quote, FIT PHNs are committed to providing the highest level of ethical client care and advocating for the best health outcomes for clients:

If they need any other services, we would determine where in the area they could go see a doctor. If it was a walk-in clinic, we would actually call the clinic and make sure that a client was able to be seen by their clinic that day. Occasionally, we were tasked with simple, basic care like changing dressings and things for clients that showed up and you could tell they been in a situation where they had some injuries so we would try to offer them some very basic nursing care.

Additionally, Sarah shared her invaluable experience working with LGBT clients and creating a safe and welcoming environment in FIT clinics. She helped clients feel comfortable by addressing their concerns, listening to them with empathy, and acknowledging their feelings.

Sarah stated that she believed “*LGBT clients didn’t feel that they were being judged or discriminated against*”.

Theme 3 - Meeting people where they are at

As discussed in the previous theme, FIT PHNs provide holistic care, considering their clients’ physical, mental, psychological, and cultural needs. The third theme of this section is related to the second theme “Holistic care” because most participants used the phrase “Meeting people where they are at” to describe the most vulnerable clients. This prominent phrase emphasizes the nursing profession’s commitment to meeting individual client needs.

During the interviews, nurses reported that they had no expectations or rules for their clients. As they visited the clinics, they welcomed clients and learned about their needs. Stephanie explained that she worked with clients regardless of their physical needs and their need for a safe space, or whether they had a language barrier or literacy inadequacy in order to ensure that clients were respected and received care tailored to their needs:

We tried to meet people where they’re at, both physically and mentally. We spent a lot of time, and I don’t know if this makes sense but establishing safety and trust, making it a safe space for people to have their questions answered, get the vaccine. Tried to make it more client centered as opposed to getting vaccinated in numbers is the priority. Making it a safe space. And I always try to promote dignity to clients and treating them with respect regardless of where they came from or who they were. We tried to be as inclusive as possible. We tried to use appropriate language, easy language with families.

Like other nurses, Sarah shared an example from her practice when she addressed a client’s unique need that would have prevented this client from receiving Covid-19 vaccination if the client had presented at the mass immunization site. According to her, she immunized a

patient who “wouldn't sit down because he danced all the time”, so she vaccinated him "while he was dancing." Most of the nurses recognized and supported their clients' needs to feel safe, heard, and welcomed regardless of who the client was or what limitations they had. Similarly to other nurses who recognized the value of therapeutic communication with clients, Jamie stressed the importance of being present in the moment and providing therapeutic listening:

Meeting them where they're at is huge. Taking the time with each individual client, if they had any concerns or questions, just being there presently, like the nurses themselves were great and answering any questions or doubt that they may have had. I think it was a really good promotion of trust with the clients.

Finally, the importance of communication cannot be over-emphasized for PHN practice. Nurses engaged in therapeutic listening and client teaching at the appropriate level for their clientele. Melanie ensured that her clients made informed decisions regarding the Covid-19 vaccination without feeling pressured. She respected her clients' decisions not to receive the vaccine that day if they did not feel ready to proceed:

I think that keeping clear communication with clients and just meeting them where they're at. And, making sure if they have any questions, they're answered. I think just basic communication. As far as those working relationships and recognizing that it's voluntary, too. So, if you have a conversation, people decide not to, that's fine, come back another time or connecting them with other clinics in the neighborhood that they might want to visit if they change their mind later.

Section 4: PHN's Experience Practice Challenges

Theme 1 - PHN's challenges to remove barriers

During the interviews, seven out of ten participants reported that removing clients' barriers to Covid-19 vaccines was challenging. In previous sections, FIT PHNs were able to remove barriers that prevented structurally disadvantaged clients from receiving Covid-19 vaccinations by collaborating with clients and interdisciplinary teams. Undoubtedly, a major challenge for PHNs was removing client barriers to vaccines that they could not control. For example, one of the challenges Susan faced as a FIT team nurse was acquiring consent from minor children or older clients who could not provide consent on their own:

Barriers at personal care homes. I guess some clients who are not able to give their own consent due to confusion or dementia. So, it would come down to their families deciding if they were to have a vaccine. So, we don't really know if the people who maybe the family refused on their behalf, we don't know if perhaps that individual really would have wanted a vaccine. There were few but definitely misinformation, kids not having that choice is not much you can do about those barriers.

During her interview, Sarah expressed ethical concerns in addition to difficulty obtaining consent from children and older clients. As a member of the FIT team, she found it challenging to provide Covid-19 vaccination to clients who were unable to comprehend vaccine-related information due to their illnesses; therefore, it was one of the barriers that she could not overcome:

I guess that might have been a challenge, when they're nonverbal. I think that was probably an ethical moral, because you're going to give the Covid vaccine, and they have

dementia. So, their proxy is the one that is consenting. I just sometimes kind of felt we were coming at them without a lot of explanation, so that was a barrier that was difficult.

Nurses previously reported that misinformation and disinformation about Covid-19 vaccine safety and efficacy played a significant role in the Covid-19 pandemic. Despite the public health goal of achieving herd immunity, many people were reluctant to get vaccinated. FIT nurses played a vital role in assisting clients in overcoming this barrier by providing them with evidence-based information and addressing their anxiety. Jamie further noted that social media negatively impacted community members and created a barrier beyond PHNs' control:

Well, I guess like some of the barriers of us not being able to address the barriers. Well, I think that definitely like misinformation played a big part in it so and so that's a barrier in itself that may not have been talked about, but social media was huge in that.

Lastly, since the FIT team clinics were mobile and moved daily or several times a day, choosing a location that could reach the greatest number of clients was crucial. Melanie expressed concerns about public health managers choosing and scheduling clinic locations without consulting nurses. As a result, some of the clinic locations were centrally located and visible to their community members, while others were less visible, leading to fewer vaccination requests:

Sometimes the clinic locations were just sort of named and so sometimes they were in locations that weren't busy. So, you know, some clinics, there would be only a few people that you'd see. So, you think, well, this wasn't assessed out like, yes, our FIT clinics are supposed to provide increased access. But if it's not a place or location that's either trusted, accessible or known to the community, then I feel like it's not, we're just there but we're not decreasing any barriers. Because we're not providing a service to, people

aren't coming. So, you kind of have to go where people are going to come otherwise, it's just for show. Yeah, so I guess those are the clinics that I felt like this is not providing a service or not meeting the needs of the FIT clinic, whether it wasn't well researched ahead of time or the word didn't get out ahead of time.

Susan also experienced lower visitation rates and vaccine uptake due to clinics' unfavourable location: *"sometimes we were sent to areas that had a either really low uptake, like sometimes nobody would come or an unsafe area where we didn't feel we could safely run a clinic that day"*.

Angela provided a valuable insight regarding the importance of having clinics in the core areas where PHNs had lower rates of visits and vaccinations. She stated that those clinics were well positioned to reach the most vulnerable clients who would not otherwise have access to Covid-19 vaccines. She stated that despite the efforts and the perceived low efficiency of those clinics, they were nonetheless essential to promoting health equity, which is the key concept and goal of mobile FIT clinics:

We would go from one shelter to a next and not everybody in those shelters would necessarily want the vaccine. So, in a day, we might only get 10 to 20 people whereas, if we were in the local community site, we might do 200, 250 people at one time...In order to vaccinate them, I think you are going to get smaller numbers. Like I said, some of the most vulnerable, the hard to reach. And when I say most vulnerable, I mean a population that definitely falls within the inequities group of people, compared to vulnerable persons when we were in assisted living facilities. But the homeless, very hard to connect with. In order to do that, I don't know any other way of doing it other than what we did. Sort of

looking for them, searching them out on the streets. Just that slow process which has an advantage to it.

Theme 2 - Trying times

One of the most prominent themes emerging during the data analysis process was trying times. This theme represents nurses' insights into their learning process and navigating the unknown during the Covid-19 pandemic. FIT team nurses described their experience working on the FIT team as experimental, filled with many difficulties and frustrations. Throughout the interview, Sarah referred to the Covid-19 pandemic as an "unprecedented time", where nurses had to adjust to a new reality of living:

Yeah, I mean, it was an unprecedented time the pandemic and nobody, you know, it's easy to look back and see the trajectory of it. But when we were in it, we didn't know what was going to happen. So many of my friends, you know, we're asking, like, how do you think this is going to play out? We didn't really have anything other than the Spanish flu to kind of, you know, as something to gauge.

Karen demonstrates how self-efficacy and confidence helped her cope with the unknown. She stated that "*there was a lot of adaptation. At the beginning, there was a lot of unknown, and you had to adjust and adapt and see*". Karen described herself as "*very capable and adaptable*". Looking back, Karen admitted that "*it was a difficult time for everybody, every single person...It was hard on family, and it was hard on me.*"

The adjustment to the new routine included learning more about the vaccine and navigating the logistics. As Jessica reflected on PHNs' efforts to learn the details pertaining to eligibility criteria, storage, and transportation of the Covid vaccine, as well as dosages for different age groups, she said:

Yeah, I felt like we were flying half of the time and trying to keep up with the ever-changing direction and guidelines. Like often you're at a clinic and you know, you'd have a client come up to you and show you on their phone saying oh, the guideline just changed and we didn't even know that yet.

In addition, Lorna expressed frustration with the rigid rules about vaccine eligibility: *"I felt like clients made it here, let's just immunize them. Because we may not get them back. And that we had to be so tight-fisted about it was frustrating".*

Many nurses reported being able to adjust to the rapidly changing rules and routines associated with the Covid-19 pandemic, but Melanie expressed difficulty balancing family and work life with the new, unpredictable clinic schedule. She was anxious about the constant rule changes and about working with new team members:

And there was a very little warning at first, OK, you're going tomorrow to whatever school it is at the other end of town. So, there was a fair bit of anxiety associated with that role I would say initially, especially for me. And the vaccines themselves were just a bit finicky as far as timing jostling, ice, no ice, timing, when you thaw, when you give, and then working with two different people on the team.

Similarly, Lorna described her experience working on the FIT team as 'chaotic', with constantly changing work hours and little stability regarding maintaining a work-life balance:

I did not enjoy work endlessly and being told tomorrow your hours would change...I think what bothered me the most was how there was no respect for our time, how they just changed your hours. So, that we couldn't have a homelife balance.... And then we were also being assigned varying shifts. So, it started off as just days and then all of the sudden it became some evening clinics, and then as things got a bit crazier, they would

just change your hours of work on a whim just because it worked better for the community organizations. So, you would just be called the day before and be told - you're not working these hours tomorrow, you're working these instead. And then we were told that based on being in a pandemic that they had a right to just call the shots with our lives. It was a bit chaotic. Part of it in the beginning was the difficulty of not having people who knew how to administer vaccines. Then you were kind of training the trainer.

Theme 3 - Lack of consultation with PHNs

During the interviews, five participants (Karen, Susan, Lorna, Jessica, and Jenna) indicated their dissatisfaction with the lack of consultation with PHNs regarding the FIT team operational decisions. Front-line staff, such as PHNs, have the best insight into decisions such as choosing clinic locations and types of services offered. Furthermore, all five nurses indicated that they were not consulted regarding the clinic locations, and they sometimes recognized that the chosen locations did not provide sufficient numbers of vaccines or did not reach the target populations of the clinics. Karen supported this claim by stating that nurses could not offer their expertise and knowledge of the community when choosing clinic locations:

It didn't feel like public health nurses themselves were really ever consulted about any of the decisions that were ever made really. Like the actual people doing the work were never really consulted. And so that's the difficult part because I think there was an untapped expertise that was missed out on by the other people who made decisions on our behalf. So, I think we'll do fine, but I think we could do even better if we were given a bit of decision making and autonomy to be able to service our clients.

In addition, Jessica suggested scheduling the same nurses for the same clinic location would have ensured continuity of care and eased nurses' adjustment and routines. As PHNs are experts in their own communities, they can provide clients with access to community resources because of their familiarity with them:

I found that we were not involved in any of the decision making when it came to where these clinics were being held. It went through management and then we were assigned, you're going to this clinic. I felt that was a barrier because we were often scheduled outside of our own community areas. So, we weren't really familiar with the locations that were the best place to address inequities.

Susan expressed her concern about not being able to provide Naloxone kits or other harm-reduction supplies, such as clean needles, during FIT clinic operations. As harm reduction is a core principle of public health nursing, Susan believed they could have incorporated this service for the most vulnerable clients since clinics were not always crowded:

Well, we wanted to give out Naloxone kits on our van. But we were told we couldn't. We did not have any ability to do a needle exchange program, that was for street links program. Those are probably our two initiatives that we were hoping we could do. But we were told we couldn't.

Section 5: Lessons Learned for The Next Pandemic

Theme 1 - The meaning of working with clients

Nine out of ten participants reported a positive experience working with clients and administering Covid-19 vaccines during the pandemic. Nurse Jamie recognized that “*the FIT nurses did a really amazing job in targeting structurally disadvantaged clients*”. She felt like

FIT PHNs were “making a difference by reducing these barriers and going to them and obviously decreasing the spread of Covid overall. “

According to Jamie, PHNs play an important role in helping clients receive the best possible care and meeting their needs:

I think they really appreciated us. And that was really rewarding that they were thankful for us being there... And helping people, going to them, and I think just the fact that we were able to help others and make them feel like they meant something right. And not forgetting about them. So, I feel that was really rewarding... So I think that's what's highlighted public health nurses, the need of public health nurses, and overall, it was a great experience and really rewarding, and I've learned a lot. I think how FIT was such a great thing overall, because it reached those who needed to be vaccinated and had the barrier. So, it was really positive experience overall.

In the same sense, Jenna reflected on the connection she developed with her clients and how she helped make them feel special and welcomed in the clinics. She stated that this connection was much more important than the number of Covid-19 vaccines provided. By providing this care, Jenna was promoting trust within her community and ensuring that her clients returned to receive the vaccines with their children and families:

It wasn't even just the numbers. It was just talking with people and their positive experiences. For example, it was interesting that we had this young teen and he actually said, 'I've never been put to the front of the line before'. And I thought, how sad it is, that kind of thing. So, just hearing that they had a positive experience and hearing that people would say oh, so and so said I should come here. So, it wasn't just the numbers. It was that people were having the positive experiences that way. And you know, bringing their

children. People have to really trust you to bring their young kids when there's a lot of doubt in the world. I thought it was good that people were bringing back family members. So, that was really positive.

Jenna echoed the concept of relationship building, stating that working with the FIT outreach team and collaborating with community members and stakeholders was a rewarding experience:

I think the relationship building was the biggest part of doing outreach... Well, I mean for me personally the whole experience was quite rewarding. There was a lot of pride, very satisfying, lots of energy. I got to work with a variety of agencies, partners, populations... I mean we had a lot of funny moments and funny stories, and I think the most rewarding part of my work, and particularly the VEMA van was I think just meeting people, a population where they were at and going to them.

Theme 2 - Public health preparedness for the next pandemic

Despite the challenges PHNs encountered when working with the FIT team during the Covid-19 pandemic, the study participants expressed their readiness to face another pandemic and its possible challenges. When asked what key lessons were learned from this pandemic, Sarah stressed the importance of building relationships with community partners and collaborating with them, as well as the importance of PHNs in preventing Covid-19 spread and promoting population health:

Yeah, I think I realized how important relationships are, those collaborative roles and how it takes a village to get things done right. The hospital acute care is looking after the people that are sick and public health had a role in promoting and preventing disease, right? So that was our role. And working with our partners to help us get here.

Most of the nurses stated that the most significant lesson they learned from this pandemic was to be flexible, calm, and more logistically organized. During this pandemic, nurses gained experience that allowed them to be more confident to cope with another pandemic because they felt they had accomplished their goals and excelled in practice. Jamie stated that as she gained more experience, she became ‘more streamline’ and ‘had a better grasp of things’:

Definitely to keep calm during stressful situations, and just kind of regroup and just take it easy and not stress right away... So just learning the logistics and the planning. Getting resources, organizing everybody, and being the go-to person as being the lead. So, I feel that you gain a lot of experience doing this kind of work, and then it prepares you for the next time, you have a better grasp of things. And more experienced so definitely helped... So just learning how to be calm, and things will work out. And really like how to be more organized, and efficient in running a clinic. And time management, give yourself time to prepare and be early, earlier than later is really important, too. So I think every step of the way, next time will be that much more streamlined because we have now experienced it.

Similarly, Stephanie encouraged nurses to be leaders and remain persistent despite challenges and unpredictability of pandemics:

Just being flexible. I think for me personally, just like stepping up and being part of it, of those pieces and not being afraid to do that. There is a lot of fear of the unknown because as you know in Covid the rollout, things were changing all the time for public health nurses. And there was a lot of confusion, a lot of unpredictability, anger. There were all those things that were going on amongst nurses that were working in the pandemic. Just

step up, be enthusiastic, be a leader. I mean going to where the clients are at is very beneficial.

Susan described a challenge she encountered during her practice and provided insight into how to deal with clients who were misinformed about the Covid-19 vaccines and were reluctant to get immunized:

You're going to have people that are listening to mainstream science and the doctors, but then you're going to have people that are just making their own stuff out. And for whatever reason, I don't know why they want to scare other people, but they do. So, understanding that's always going to happen in a pandemic, and not being surprised by that. But you have to let that go and just do what you can and not worry about the people that are working against you. Just offering your services to the people that want it and trying to provide information to the people that are on the edge. But I know that in future pandemics there are always going to be people that are not going to be interested in your information or your vaccines. So just being aware of that's going to happen.

The role of PHNs during the Covid-19 pandemic cannot be overstated. Although PHNs encountered multiple challenges in their practice, they demonstrated commitment and passion for their profession, ultimately benefiting clients and the society as a whole. In conclusion, Karen stated that she believes “*PHNs are in a good position to be helpful for the next pandemic.*”

Chapter Summary

In this chapter, I discussed the findings of the study interviews with ten PHNs who worked on the FIT team. The presented study findings were organized into five sections and eleven themes. The interviews with study participants facilitated a deeper understanding of the PHNs' contributions to removing barriers to Covid-19 vaccines during the Covid-19 pandemic.

The data collected from these interviews were analyzed to identify clients' barriers to vaccines, to highlight PHNs' contributions to resolving these barriers, to determine what PHNs did for the FIT team, to understand PHNs' practice challenges, and to identify lessons learned. This study provided insights that could be used in the context of the research question and compared with other studies to gain a deeper understanding of the study's phenomena.

Chapter 6: Discussion

In chapter six, I discuss the findings of this qualitative study exploring the role of PHNs in removing clients' barriers to Covid-19 vaccines during the Covid-19 pandemic. This includes examining the emerged study themes in relation to the study research question and study objectives, as well as published literature. I then relate the findings to the theoretical framework that guided the study. I provide recommendations for nursing practice, administration, education, research, and public health policy. Finally, I discuss the study's strengths and limitations, as well as the proposed study dissemination plan.

The purpose of this study was to address the following research question: *What is the role of PHNs in promoting equitable access to Covid-19 vaccinations among structurally disadvantaged clients during the Covid-19 pandemic?* The findings also addressed the following four study objectives: 1) To identify the major challenges structurally disadvantaged populations face when accessing Covid-19 vaccines, as they were identified by the FIT PHNs. 2) To determine the role of PHNs in reducing barriers accessing Covid-19 vaccines. 3) To describe the major challenges that PHNs have faced in their work addressing barriers to Covid-19 vaccines. 4) To identify lessons that can be learned from PHNs' practice that could aid in preparing for possible future public health emergencies.

The study findings were organized into five sections and 11 themes, which each theme addressing one or more of study objectives (See table 2 below). Section one: *Clients' barriers to vaccines*; Section Two: *Different locations of FIT clinics, PHNs addressing clients' barriers to Covid-19 vaccines*; Section Three: *Interdisciplinary team collaboration, Holistic care, Meeting people where they are at*; Section Four: *PHNs' challenges to remove barriers, Trying times,*

Lack of consultation with PHNs, Section Five: The meaning of working with clients, and Public health preparedness for the next pandemic.

Table 3. Study Objectives and Correlating Themes

Objectives	Correlating Themes
<p>1) To identify the major challenges structurally disadvantaged populations face when accessing Covid-19 vaccines, as they were identified by the FIT PHNs.</p>	<p>Clients' barriers to vaccines.</p>
<p>2) To determine the role of PHNs in reducing barriers accessing Covid-19 vaccines.</p>	<p>Different locations of FIT clinics, PHNs addressing clients' barriers to Covid-19 vaccines, Interdisciplinary team collaboration, Holistic care, Meeting people where they are at, the Meaning of working with clients.</p>
<p>3) To describe the major challenges that PHNs have faced in their work addressing barriers to Covid-19 vaccines.</p>	<p>PHN's challenges to remove barriers, Trying times, and Lack of consultation with PHNs.</p>
<p>4) To identify lessons that can be learned from PHNs' practice that could aid in preparing for possible future public health emergencies.</p>	<p>Public health preparedness for the next pandemic.</p>

Situating the Findings in the Literature

The first objective was to determine the role of PHNs in reducing barriers to accessing Covid-19 vaccines. The theme that addressed this objective was: *Clients' barriers to vaccines*. This theme provided insight into vulnerable clients' barriers to vaccines and the potential role PHNs can play in reducing these barriers. Study findings revealed that the most crucial barriers were transportation, low literacy, language barriers, mistrust in the healthcare system, previous trauma related to seeking medical care, and clients' perception of healthcare providers' judgement. PHNs reported that unhoused clients who lived in shelters or on the streets were among the most vulnerable clients experiencing these barriers. The research has shown that protecting vulnerable clients with Covid-19 vaccines reduces morbidity and mortality and improves health outcomes. Immigrants, clients with physical or mental health challenges, as well as clients from low-income households, may be unable to access transportation or schedule an appointment at mass immunization sites, resulting in an increased risk of contracting the Covid-19 infection (Abba-Aji et al., 2022; Burke et al., 2021; Castillo et al., 2021; Sebring et al., 2022).

The nurses who participated in the study reported that immigrants and refugees often face challenges finding the appropriate information about Covid-19 vaccines, such as eligibility criteria and different types of vaccines. These challenges can discourage clients from seeking out Covid-19 immunizations (Abba-Aji et al., 2022; Castillo et al., 2021; Evans et al., 2021; Ismail et al., 2021; Sebring et al., 2022; Purba, 2020). Misinformation and disinformation can also lead to mistrust and confusion regarding vaccines' efficiency. Study participants indicated that low literacy levels prevented some clients from obtaining evidence-based information and making informed decisions. People in immigrant and refugee communities distrust vaccines, believing there could be a hidden agenda or trial research behind the innovative vaccine (Crawshaw et al.,

2021; Gerretsen et al., 2021; World Health Organization, 2022). Vaccine hesitancy can also be associated with clients' previous experiences with the healthcare system or media communication (Benjamin, 2020; Brownson et al., 2020; Burke et al., 2021; Castillo et al., 2021; Chirico & Da Silva, 2023; Dada et al., 2022; Demeke et al., 2022; Epps et al., 2021; Gerretsen et al., 2021; Lessard et al., 2022; Lin, 2022; World Health Organization, 2022). The PHNs stated that they were respectful of their clients' perceptions of Covid-19 vaccines and provided evidence-based information to dispel myths and clients' misconceptions.

The second objective of the study was to determine whether PHNs can reduce barriers to accessing the Covid-19 vaccines. The themes that addressed this objective were: *Different locations of FIT clinics, PHNs addressing clients' barriers to Covid-19 vaccines, Interdisciplinary team collaboration, Holistic care, Meeting people where they are at, and The meaning of working with clients.* As FIT team members, the PHNs played a crucial role in removing clients' barriers to Covid-19 vaccines during the Covid-19 pandemic. The responsibilities of this leadership role included providing Covid-19 immunizations and appropriate vaccine education and holistic care to clients, coordinating clinics, working as part of a multidisciplinary team, as well as promoting intersectoral collaboration. Literature supports this role by demonstrating PHNs' advocacy role in health equity promotion through participation in outreach activities with the goal of delivering direct patient care to the most vulnerable clients (Castillo et al., 2021; Dada et al., 2022; Demeke et al., 2022; Nana-Sinkam et al., 2021; Pinto et al., 2021). Study participants described their practice on the FIT team as challenging due to the novelty of the Covid-19 virus and the unprecedented circumstances of the pandemic. Although nurses had to overcome organizational challenges and multiple barriers to provide Covid-19 immunizations to the most vulnerable clients in the community, they found their work rewarding

because they had the opportunity to provide Covid-19 immunizations to the most vulnerable clients in the community.

The flexible structure of the FIT program enabled nurses to reach many community members. FIT pop-up clinics were located in fixed locations to facilitate reaching specific populations, such as older clients, children, and the sick. On the other hand, the van mobile clinics traveled across Winnipeg to find clients on streets and in parks. Literature shows that this evidence-based approach is effective in delivering health care and social services to clients who face physical barriers (Attipoe-Dorcoo et al., 2020; Babando et al., 2021; Castillo et al., 2021; Lin, 2022; NCCDH, 2013b; Pinto et al., 2021; Province of Manitoba, 2021a).

According to the nurses, mobile FIT clinics were one of the most significant ways PHNs ensured unhoused clients had access to vaccines despite physical barriers. The mobile clinics improved service provision to clients “where they are at”, which has been shown in literature to improve health outcomes and promote health equity (Attipoe-Dorcoo et al., 2020; Jamal, 2018). Equally important, fixed FIT clinics were crucial in addressing access barriers for children and families. Having immunization clinics in schools made it easier for families and children to obtain vaccines without scheduling appointments and arranging transportation. PHNs stated they could provide information to families on site and also administer vaccinations the same day if parents wished to proceed with vaccinations.

According to Cusack et al. (2017), a therapeutic, non-judgemental approach is crucial for PHNs’ practice when working with clients. Nurses noted that by creating a welcoming and supportive client environment, they could remove clients’ major barriers to vaccines, such as perceived judgement and mistrust of the healthcare system. As PHNs facilitate client-centred care and support a team-based work model, they assist clients in building capacity to access

community resources and ultimately improving their health (Jamal, 2018). Research shows (Sanders & Burnett, 2019; Sukhera et al., 2021) that clients without identification documents face significant barriers to accessing social and health care services. PHNs displayed creativity in their approach to the client identification process in order to increase client immunization rates. In contrast to mass immunization sites, FIT PHNs were able to identify clients by alternative documents, such as family doctor records or previous health care visits.

This study demonstrated that interdisciplinary team collaboration is a central tenet in PHN work. This approach guided FIT practice and improved PHNs' ability to remove clients' barriers to vaccines due to the available resources and professional expertise of intersectoral health care professionals (Babando et al., 2021; Baxter et al., 2024; Healey & Lesneski, 2011; Nana-Sinkam et al., 2021). PHNs provided respectful and culturally appropriate care to clients by forming community coalitions and working with multidisciplinary teams. By forming community coalitions and working with multidisciplinary teams, PHNs provided client care in a respectful and culturally-appropriate manner.

The majority of nurses stated that providing holistic care to their clients was a positive experience. According to nurses, trust building was essential to building professional therapeutic relationships with clients and helping them feel welcomed and respected (Schoon & Krumwiede, 2022). By providing holistic care to clients, PHNs addressed the SDOH that posed barriers to structurally disadvantaged clients seeking Covid-19 vaccines (Benjamin, 2020; Brassolotto et al., 2014; Breny, 2020; Haworth-Brockman & Betker, 2020; Jamal, 2018; McPherson et al., 2016; Schoon & Krumwiede, 2022; Lynch, 2020).

The nurses recognized that in addition to addressing clients' physical needs, they worked collaboratively to address emotional, mental, and spiritual aspects of clients' needs. PHNs

provided a safe space for clients to share their feelings and seek support. Literature has shown that immigrants who are newly arrived in Canada require increased social supports in order to decrease gaps compared to Canadian-born clients (Edmonds & Flahault, 2021). Socially well-supported clients have decreased rates of illnesses, including Covid-19 infection, as well as better health outcomes (Ala et al., 2021; Babando et al., 2021; Bambra et al., 2020; Bolcato et al., 2021; Afifi et al., 2020). Therefore, to improve clients' health outcomes, PHNs prioritized clients' needs and emphasized social aspects of client care.

According to the nurses, their participation on the FIT team benefited them and their clients. By promoting health equity, they believed they improved health outcomes for their clients. One of the nurses stated that the connections she had established with clients and community agencies were valuable to her practice as a PHN. Community connections can provide socially-isolated clients with strategies to feel less isolated and encourage them to improve their health by engaging in appropriate programs and services (Babando et al., 2021; Browne et al., 2016). Implementation of this health promotion strategy was evident in PHNs' practice as they observed clients returning for various health care services, such as medical referrals, wound care treatments, and information about community services.

The third objective of the study was to describe the major challenges PHNs faced in their work addressing barriers to Covid-19 vaccines. The themes that addressed this objective were: *PHN's challenges to remove barriers, Trying times, and Lack of consultation with PHNs*. Most of the study participants indicated that they had challenges removing clients' barriers to Covid-19 vaccines primarily because of circumstances beyond nurses' control. According to nurses, time constraints and existing policies regarding clinic operation processes served as a barrier and hindered nurses' ability to promote health equity (Jamal, 2018). PHNs suggested that some of the

mobile van clinics were positioned in sub-optimal locations, which could have been prevented if managers consulted nurses prior to scheduling them. Previous literature suggests that the distribution of social and health resources can be unequal in communities due to administrative and sociopolitical policies, which exacerbates vulnerable clients' health inequities (Gelormino et al., 2015; Glover et al., 2020).

Lack of consultation with nurses was one of the most prominent PHNs' challenges in addressing clients' barriers to vaccines. Nurses unanimously expressed their frustration regarding management and decision makers' lack of consultation regarding the agenda and management of the Covid-19 pandemic public health response and outreach clinics. Front-line nurses stated that they understood their communities and the health needs of their clients, as well as local resources that could be offered in response to the pandemic. It is possible that nurses could have contributed to the choice of clinic locations and services offered at FIT clinics. Additionally, the nurses believed that they could have provided a wider range of services to clients presenting for immunizations, such as Naloxone kits and other harm reduction supplies. PHNs are experts in health equity promotion due to their invaluable knowledge and expertise in community engagement and policy promotion (Jamal, 2018; Kemppainen et al., 2013). Historically, PHNs were responsible for illness prevention initiatives, and consultation and patient education (Kemppainen et al., 2013; NCCDH, 2013b; WRHA, 2018). The nurses recommended involving them in the case of another pandemic in the future.

According to PHNs, other factors, such as media miscommunication and clients' misperceptions about Covid-19 vaccines, significantly contributed to hesitancy and disbelief in vaccine effectiveness. Literature suggests that low health literacy levels and mistrust in government can impact clients' willingness to get vaccinated against the Covid-19 virus (Ala et

al., 2021; Anderson, 2021; Chirico & Da Silva, 2023; Crawshaw et al., 2021; Edmonds et al., 2021; Ismail et al., 2021). Vaccine hesitancy remains one of the most significant public health threats, which requires planning and implementation of public health strategies in order to address the phenomenon (Ala et al., 2021; Babando et al., 2021; Burke et al., 2021). Although nurses provided reliable information about vaccinations, many clients declined vaccinations, increasing their risk of infection with Covid-19.

In addition to the previously mentioned factors that prevented PHNs from helping clients to access Covid-19 vaccines, nurses indicated that the novice nature of the virus and unfamiliar work routines hindered their ability to help clients access Covid-19 vaccines. They recalled feeling anxious due to unknown situations and the rapidly changing protocols and practice directions from management. Although many nurses described themselves as “resilient”, “adaptable”, and “very capable”, other nurses had difficulties adjusting to the ongoing stress and experienced the need to change their practices.

According to The Chief Public Health Officer of Canada (2020), health care professionals and clients may feel stressed and worried due to the uncertainty of pandemics, but these feelings can decrease their ability to cope and lead to long-term health consequences. Studies show that individuals were more reluctant to seek health care services during the Covid-19 pandemic due to inadequate social supports and financial resources (Crawshaw et al., 2021; Burke et al., 2021). Since PHNs provided direct client care and vaccines to underserved populations, their contribution to outreach programs during the pandemic was vital.

Finally, the fourth objective of the study was to identify lessons learned from PHNs’ practice that can help prepare for possible future public health emergencies. The theme that addressed this objective was: *Public health preparedness for the next pandemic*. Public health

pandemic preparation is a complex process that involves consultation and collaboration with local and international government stakeholders (Epps et al., 2021; The Chief Public Health Officer of Canada, 2020). Research suggests that policy interventions for pandemic response plans should use a health equity and social justice lens to ensure equitable distribution of resources to protect vulnerable populations (Glover et al., 2020). The Covid-19 pandemic response plan created in 2020 and revised during the pandemic was based on the Influenza pandemic response plan created in 2018 (The Chief Public Health Officer of Canada, 2020). If pandemic response policies and interventions are not designed in a way that emphasizes social justice, they can negatively impact disadvantaged populations. Therefore, analyzing the current pandemic response challenges and accomplishments is essential so that future pandemic response plans can be improved (Babando et al., 2021; Glover et al., 2020; Bolcato et al., 2021; Lynch, 2020).

In this study, PHNs shared their insights and lessons learned during their practice on the FIT team. Study participants emphasized the need to streamline the work process and increase the number of target immunizations by improving the logistics and operational functions of the public health branch. The nurses believed that active involvement of PHNs in pandemic response policies and operational management of immunization clinics could have increased immunization rates and improved client outcomes. The nurses indicated that their expertise and knowledge of community resources could have enhanced the existing public health pandemic response plan and provided better support to clients. This statement is supported by literature as it has been demonstrated that the active engagement of key stakeholders and community partners in the establishment of public health initiatives is crucial to enabling health equity policies and to

promoting health outcomes for disadvantaged populations (Edmonds et al., 2020; Canadian Public Health Association, 2010; NCCDH, 2020; Public Health Ontario, 2020).

The study also identified PHNs' personal and professional qualities that contribute to their ability to perform during pandemics and achieve public health goals. Nurses required leadership vision and skills in order to practice the full scope of PHN practice and cope with the challenges that arose during the Covid-19 pandemic. Even though PHNs demonstrated their resilience and ability to adjust to rapidly changing PHN practice long prior to the Covid-19 pandemic (Cohen & Marshall, 2017; Cusack et al., 2017; Dahl & Clancy, 2015; NCCDH, 2018; Moss & Phillips, 2020), this study illuminated FIT team nurses' remarkable qualities during the Covid-19 pandemic. Nurses stated that they learned to be more flexible, calm, persistent, and confident, qualities that leaders need during uncertain times (Dahl & Clancy, 2015). The FIT team nurses recognized that even though they faced multiple barriers in their practice during the Covid-19 pandemic, this experience enhanced their ability to respond to pandemics in the future.

Relating the Findings to the Guiding Framework

This study was designed and analyzed based on the WRHA PHN Professional Practice Model (PHNPP). The framework contributed to understanding the study phenomenon by situating the findings in the literature and conducting a content analysis to establish patterns and connections between the themes. The PHNPP model was used to evaluate existing research in the study field and identify research gaps. Accordingly, this theoretical framework is derived from the nursing field, which is aligned with the study's professional objective of exploring nursing phenomena. Using interviews as a primary method to gather data provided an opportunity to connect with the study participants and ask open-ended questions with probes.

Thus, participants were able to establish interpersonal trust and share their perspectives about their work on the FIT team.

The first core concept of delivery structure and process was paired with 10 organizational strategic approaches to link the study results to the guiding framework. A concept of delivery structure and process includes ten strategic approaches: Outreach, Public Health Clinical Practice, Collaboration and Partnership, Health Assessment, Community Development, Health Communication, Health Public Policy, Healthy Built and Social Environment, Applied Public Health Research, and Surveillance.

The study's findings demonstrate the importance of the outreach strategy as outlined in the PHNPP model. Since PHNs coordinated the delivery of Covid-19 vaccinations and promoted access to vaccination clinics, the FIT outreach initiative aligned with the public health clinical practice and outreach strategic approaches to the PHNPP model. Study results demonstrate that FIT nurses had a crucial role in identifying and reducing barriers to Covid-19 vaccines when working in FIT outreach clinics. Immunization clinics were scheduled at various locations and during different work hours to accommodate clients' physical, mental, and emotional needs.

As outlined in the strategic approach of the delivery structure and process concept, developing alliances with non-government organizations and engaging in meaningful collaboration and partnership to address the SDOH can positively impact on population health and effectively address health inequities. Intersectoral collaboration was an important part of FIT teams' practice during the Covid-19 pandemic, as demonstrated in this study. Through partnerships with community organizations, FIT nurses were able to deliver life-saving Covid-19 vaccines to the most vulnerable clients during the Covid-19 pandemic. Additionally, PHNs

worked with community groups to increase Covid-19 immunization rates by introducing evidence-based programs to schools and community programs.

The FIT nurses provided holistic and accessible health services and programs in line with the PHNPP model's health assessment and community development concept. For example, they scheduled outreach FIT clinics and allocated resources to meet the needs of the most vulnerable clients. PHNs completed community assessments and identified individuals in need of immunizations, made referrals, and coordinated vaccination services. FIT PHNs empowered community members and built capacity by working with families and individuals to promote healthy choices and encourage the uptake of Covid-19 vaccines. PHNs used their knowledge of health and social environments to facilitate equitable access to immunization programs for clients with structural barriers. In addition to increasing Covid-19 immunization uptake rates, PHNs collaborated with community agencies to promote social and health services available to clients. The PHNs advocated for the implementation of the FIT program and sought strategies to improve client services.

PHNs used health communication strategies to raise awareness of existing inequities and the systematic barriers faced by equity-seeking populations. PHNs used local media channels and technology to communicate effective health practices and promote immunization awareness. Furthermore, PHNs incorporated this role into their practice by working with community stakeholders and promoting policies that support disadvantaged populations' rights.

Identifying emerging issues through public health surveillance is an essential part of public health decision-making. PHNs contributed to a public health surveillance program by identifying Covid-19 disease trends, identifying community priorities, determining appropriate interventions, and evaluating immunization outreach programs. As part of public health

surveillance, Covid-19 immunization rates were monitored, cases and contacts were managed, and public education regarding new strains of the virus was provided.

To address health inequities, the last strategy of the PHNPP model involves participation in public health policy and applied health research. Study participants expressed concerns about being excluded from the decision-making process of the Covid-19 pandemic management plan, limiting their ability to engage in advocacy initiatives. Although the focus of this study was on PHNs' roles in promoting health equity through their role in the FIT outreach program, other studies have demonstrated PHNs' involvement in health equity advocacy and policy promotion through other initiatives. Therefore, this essential PHN core competency is recommended for further research during future public health pandemics.

Recommendations for Nursing Practice, Administration, Education, and Research

The study results have implications for PHN practice, administration, education, and research. The foremost recommendation for PHN practice is to enhance PHNs' preparedness and develop a management plan for possible future global pandemics. Improving outbreak management policies and vaccine logistics could improve service delivery and reduce the burden of the Covid-19 disease. Since frontline PHNs are familiar with their communities and have trusted relationships with clients and stakeholders, they should be consulted regarding outbreak operational decisions. This study found that frontline PHNs who face rapidly changing environments and demanding workloads should have access to professional support.

A recommendation for the administration domain includes establishing public health outbreak management policies based on health equity principles in order to protect vulnerable clients and ensure equitable distribution of health resources. National, provincial, and local government agencies in Canada that provide health and social services to clients should promote

health equity advocacy by adopting policies that support equitable access to health services for vulnerable clients. As a means of mitigating the risk of misinformation being delivered to community members about Covid-19 vaccines, government agencies should ensure media channels provide evidence-based information about the vaccines. Communication between the government, healthcare providers, and citizens is essential to promoting trust and vaccine acceptance.

Recommendations for education include the evaluation of nursing curricula in post-secondary institutions and the inclusion of the concept of ‘health equity promotion’ in nursing programs in Canada. In addition, the College of Nursing could develop and implement a simulation model for pandemic plans, which would allow students to practice their problem-solving and critical thinking skills and improve pandemic plans. In this way, students will understand fundamental public health concepts and be better prepared to provide culturally appropriate, competent care to vulnerable populations.

Several recommendations are also made for further research in this area of interest. Although there is an abundance of literature on promoting health equity during the pandemic by prioritizing Covid-19 vaccines for vulnerable populations, there is not sufficient evidence regarding PHNs’ role in the outreach FIT team in the local context of Manitoba. Further research is needed to determine how local public health outreach programs can optimize equitable service delivery to improve health outcomes for vulnerable clients during global public health outbreaks. Consequently, research should be conducted on the role and contribution of PHNs to promoting health equity during global public health outbreaks. An exploration of this study phenomenon across several health regions could be beneficial to compare outbreak management strategies and learn about various health equity promotion strategies that each region employs.

Recommendations for Public Health Policy

The findings of this study support the need to review public health policies related to the Covid-19 pandemic outbreak and improve public health preparedness for future global pandemics. In order to advance health equity and protect clients who are at higher risk of acquiring Covid-19 infection, government agencies should establish policies that facilitate equitable access to immunization clinics. Improving policies related to scheduling immunization appointments, facilitating transportation access, providing translation services, and addressing vaccine hesitancy can have a positive impact on clients' health outcomes and decrease morbidity and mortality. Government agencies and public health managers need to include PHNs in the decision-making process regarding outbreak management plans and seek their input on policies affecting vulnerable clients. Sharing information is crucial to promoting trust and vaccine uptake during public health emergencies, such as the Covid-19 pandemic. Policymakers need to use evidence-based data to generate and deliver statistics about the efficacy of Covid-19 vaccines, morbidity and mortality rates associated with Covid-19 infection, and current scientific trends. By integrating scientific evidence into policies, government agencies can promote decision-making among the general population and healthcare professionals.

Strengths and Limitations

In this study, my positionality as a former PHN who worked in the WRHA PPH served as both a strength and limitation. Consequently, I sometimes made assumptions about the study phenomenon, the context, and the participants. A prominent strength of being an insider in public health provided me with an understanding of PHNs' role on the FIT team. Additionally, my position as an insider allowed me to empathize with PHNs' practice challenges and evaluate their responses to interview questions critically. My academic and professional background allowed

me to find similarities between study participants and myself, which made me feel like an insider. However, being in this position, I may have inadvertently influenced the data collection and analysis process and contributed to my own vision of the studied phenomenon. For example, because I assumed my position as an insider in public health was sufficient to ensure that I had adequate information about participants' professional training and background, the research study did not include participants' demographic information, such as professional experience, education, or professional development.

This study had a sample size of 10 nurse participants, which could potentially act as a study limitation and could be addressed in future research. This number of participants might be considered a small size, thus, potentially restricting my ability to discover rich data about the phenomenon. The ID methodology supports a smaller sample size by focusing more on the context of the study and the researcher's subjective experience than viewing the sample size as an indicator of the study's success. ID demonstrates that a smaller sample size can be appropriate if data richness and saturation are achieved. While this study reached data saturation, a larger sample size would have provided a broader examination of the study phenomenon. Additionally, the study findings are well supported by previous literature, which enhances the trustworthiness of the findings.

Furthermore, participant interviews were the only method of data collection used in this study. The study was conducted during the post-pandemic period when FIT clinics were no longer operating, so observation was not included. According to Holloway and Wheeler (2010), by observing the study phenomenon and immersing the researcher in the study culture and setting, a more thorough understanding of the study phenomenon can be gained. This limitation

was compensated for by my former PHN experience working with disadvantaged clients and delivering vaccines during the Covid-19 outbreak.

Lastly, since this research was conducted in the local setting, no comparable qualitative studies have been conducted to examine PHNs' practices in outreach immunization clinics. Therefore, these study findings may not be transferable to other regions due to operational or contextual differences.

Addressing Personal Assumptions

The importance of reflecting on my own beliefs, values, and attitudes enables a rigorous qualitative research process free of bias; however, achieving completely value-neutral research might be challenging. I aimed to be conscious of my personal value system in order to reflect on my personal, social, moral, and competency values. My personal value systems may not have been fully apparent to me during the initial stages of this research study; therefore, as part of the process of operationalizing reflexivity, I kept field notes and used reflective bracketing to clarify my own perspective (Patnaik, 2013). My values may have skewed the results without bracketing if I thought that participants' perspectives differed from mine, unintentionally influencing the interpretation of the findings.

My social values may have influenced interview guide construction, as well as data interpretation. My moral and competency values, as well as my previous experience working as a PHN, may also have conflicted with data analysis. My preconceived notions about the roles of PHNs could have affected how I interpreted the study results and arrived at conclusions. My values did not influence participant selection due to the rigid criteria for participant selection, such as working as a PHN with FIT outreach immunization clinics in WRHA during the Covid-19 pandemic.

In contrast to other theoretical frameworks, where researchers are discouraged from coming to the study with existing biases and assumptions about the research topic (Thorne et al., 2004), I approached this study with my previous theoretical knowledge and clinical experience in public health. Thorne et al. (2004) state that a researcher can use existing hypotheses to facilitate ongoing dialogue with study participants and promote inductive reasoning. I approached this study based on my previous knowledge about a health equity concept and PHNs' roles in promoting equitable access to Covid-19 vaccines that I gained from literature review and my nursing practice. I used ID to fill in the current knowledge gaps and generate a new knowledge base that could be significant to public health nursing practice and research.

Four ontological assumptions have guided my research process for this study. The first assumption is that limited resources should be distributed to disadvantaged populations in a priority manner. Based on the basic principle of health equity, this assumption recognizes that an equitable distribution of health and social resources to populations-at-risk can significantly decrease morbidity and mortality. The study results indicate that the FIT team clinics prioritized the needs of vulnerable clients in the community. FIT clinics used this approach in their management strategy, such as scheduling different times and locations to decrease access barriers and provide Covid-19 vaccines to vulnerable clients when supplies were limited.

My second assumption was about the rapidly amplifying health inequities that vulnerable individuals experienced during the Covid-19 pandemic. This study's findings validated my assumption that Covid-19 vaccines were among the most important recognized public health resources that prevented further health complications. The nurse participants in this study indicated that they witnessed clients' inequities related to SDOH. The nurses recognized that the effects of the pandemic, such as isolation, financial difficulties, and increased stress, exacerbated

these inequities. Due to their efficacy in reducing morbidity and mortality, Covid-19 vaccines were the most important public health resource that vulnerable clients needed during the unprecedented times of the Covid-19 pandemic.

The third assumption I made was that addressing clients' barriers to Covid-19 vaccines could increase vaccine uptake and improve health outcomes for populations at risk. Nurses reported that they worked with each client individually and the community as a whole to overcome access barriers to vaccines. Due to the flexible approach utilized by the FIT team nurses, the uptake of Covid-19 vaccines significantly increased throughout the pandemic.

The final assumption I made was that sufficient funding contributed to an equitable allocation of Covid-19 vaccines. Therefore, an inadequate supply of Covid-19 vaccines due to limited government funding may impede health equity promotion efforts. The study results confirmed this assumption because the FIT clinics were scheduled in accordance with the community's needs, prioritizing clients most in need of Covid-19 vaccines. The clinics began their operation by focusing on children, older clients, clients with medical conditions, and those who lived in congregated settings. This strategy was implemented due to the limited vaccine supply which was more prominent at the beginning of the pandemic.

Dissemination Plan

The findings of this study will be disseminated at the local and national levels. On a local level, I will present the study findings to the study participants and PHNs at a annual public health professional development conference. Additionally, I will present the findings to the Clinical Nurse Specialist (CNS) interest group, and to the Association of Registered Nurses of Manitoba (ARNM) Tuesday Talk presentation. I will share these study findings at the University of Manitoba's annual poster presentation event, and at Dr. Lynn Scruby's master's course titled

Integrative Focus. As part of the national level dissemination plan, I will present the study results at the National Collaborating Centre for Determinants of Health (NCCDH) webinar and at the Community Health Nurses of Canada conference. Finally, I will publish the study findings in a peer-reviewed nursing journal.

Chapter Summary

In this chapter, I presented the findings of a qualitative study exploring the role of PHNs in promoting equitable access to Covid-19 vaccinations for structurally disadvantaged clients during the Covid-19 pandemic. I discussed the findings in the context of the literature and the theoretical framework, as a blueprint for study design and methodology. Based on the study findings, I provided recommendations for nursing practice, administration, education, research, and public health policy. In addition to summarizing the study's strengths and limitations, I discussed my strategy to overcome limitations. Lastly, I outlined a method for disseminating results to encourage their use and uptake.

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Appendices



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nursing@umanitoba.ca

Appendix A: Letter to Program Director Requesting Access to Organization

Dear Carolyn Perchuk,

I am writing this letter to request access to your organization for research purposes. My name is Yael Gelfman, I am a graduate student in the Master of Nursing program at the University of Manitoba. As part of the requirements of the Master of Nursing program, I am conducting a research study titled “Reducing Barriers to Covid-19 Vaccines Among Structurally Disadvantaged Populations: The Role of Public Health Nurses in Promoting Health Equity”. The purpose of this qualitative research study is to explore the practice roles of PHNs during the pandemic in regard to their contribution to reducing barriers to Covid-19 vaccines and promoting health equity among equity-seeking clients. I am requesting your permission to contact public health nurses who were part of the FIT team during the Covid-19 pandemic.

I would like to request that an invitational email be sent from your office to the identified FIT nurses who would be suitable to interview for this research study (the email is attached). This email provides information about the study purpose, estimated participation requirements, and an invitation to participate. Voluntary nature of participation will be highlighted in both the email, as well as when obtaining informed consent.

This research study is supervised by a thesis committee consisting of Dr. Lynn Scruby, College of Nursing, University of Manitoba (thesis chair and advisor); Dr. Cheryl Cusack, College of Nursing, University of Manitoba (internal member); and Dr. Nathan Nickel, Faculty of Community Sciences, University of Manitoba (external member). The study has been approved by the Research Ethics Board, University of Manitoba, Fort Garry campus. A copy of the approval is attached. Data collection is planned to begin in November 2022. A summary of the study findings will be provided to you, if requested.

Please contact me if you require further information regarding this study. I look forward to your response. If you have any concerns or complaints about this project, please contact me [REDACTED], my advisor Dr. Scruby [REDACTED], or the Human Ethics Coordinator at 204-474-7122 or email humanethics@umanitoba.ca.

Thank you.
Sincerely,
Yael Gelfman RN, BN



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Appendix B: Letter of Invitation to Participate in Research Study

Dear Public Health Nurse,

I am a graduate student in the Master of Nursing program at the University of Manitoba. As part of the requirements of the Master of Nursing program, I am conducting a research study titled “Reducing Barriers to Covid-19 Vaccines Among Structurally Disadvantaged Populations: The Role of Public Health Nurses in Promoting Health Equity”. The purpose of this qualitative research study is to explore the practice roles of PHNs during the pandemic in regard to their contribution to reducing barriers to Covid-19 vaccines and promoting health equity among equity-seeking clients.

To conduct this study, I am looking to recruit approximately 8-10 FIT public health nurses. You are receiving this email as you have been identified by the WRHA PPH director as a nurse who had worked on the FIT outreach team during the Covid-19 pandemic.

Would you be willing to talk about your experiences of providing Covid-19 vaccines on the outreach team during the Covid-19 pandemic? I would love to hear about your thoughts and perspectives about your experience.

Participation in this study is voluntary and if you choose to not participate in this study, it will not affect your work at WRHA. The WRHA will not know who participate in the study as your participation is strictly confidential. You can withdraw from the study at any time.

This research has been approved by the Research Ethics Board, University of Manitoba, Fort Garry campus and an approval to access site received from WRHA. Any concerns or complaints can be directed to the Human Ethics Coordinator at 204-788-3255 or email: humanethics@umanitoba.ca.

Principal Investigator

Yael Gelfman RN, BN, Master of Nursing Student
College of Nursing, Rady Faculty of Health Sciences, University of Manitoba
Contact Information: [REDACTED] gelfmany@myumanitoba.ca

Thesis Advisor

Dr. Lynn Scruby RN PhD, Assistant Professor, College of Nursing, Rady Faculty of Health Sciences, University of Manitoba
Contact Information: [REDACTED] lynn.scruby@umanitoba.ca

Thesis Committee Members

Internal Member: Dr. Cheryl Cusack RN PhD, Assistant Professor, College of Nursing, University of Manitoba

External Committee Member: Dr. Nathan Nickel, MPH, PhD, Rady Faculty of Health Sciences, University of Manitoba

If you decide to participate in this study, I will meet with you in person or via the Zoom platform to ask you questions about your experience working as a public health nurse on the FIT team. This interview will last approximately one hour. After that, I will send your audio-recorded interview to a professional transcriptionist who will develop a transcript of the interview. The transcriptionist will sign an oath of confidentiality and be instructed not to include any identifying information. If you provide consent, I will send you a preliminary analysis of the interview and a summary of the research findings via e-mail. You can choose not to answer any question(s) or you can withdraw from the study at any time with no consequences. After you consent to participate in the study, you will receive a \$25 gift card to Starbucks. To arrange an interview or get more information about this study, please call [REDACTED] or email: gelfmany@myumanitoba.ca

Please respond to this email by _____

Thank you for your consideration,

Yael Gelfman RN, BN

Appendix C: Consent Form for Study Participants

Principal Investigator

Yael Gelfman RN, BN, Master of Nursing Student
College of Nursing, Rady Faculty of Health Sciences, University of Manitoba
Contact Information: [REDACTED] gelfmany@myumanitoba.ca

Thesis Advisor

Dr. Lynn Scruby RN PhD, Assistant Professor, College of Nursing, Rady Faculty of Health Sciences, University of Manitoba
Contact Information: [REDACTED] lynn.scruby@umanitoba.ca

Thesis Committee Members

Internal Member: Dr. Cheryl Cusack RN PhD, Assistant Professor, College of Nursing, University of Manitoba
External Committee Member: Dr. Nathan Nickel, MPH, PhD, Rady Faculty of Health Sciences, University of Manitoba

Sponsors

Funding was attained through the graduate student awards provided by the following organizations: Irene E. Nordwich Foundation, Association of Regulated Nurses, Centennial Legacy Fund, Jewish Foundation of Manitoba, and the Foundation of Registered Nurses of Manitoba.

This consent form is only a part of the process of informed consent. You will have a copy of your own consent form for your own records. The consent form should give you a basic outline of what the research is about and your duty as a participant. If you require more information about something discussed here, or details not included here, please inquire about it. Please read this form carefully and to be attentive to any provided information.

Purpose of Study

“Reducing Barriers to Covid-19 Vaccines Among Structurally Disadvantaged Populations: The Role of Public Health Nurses in Promoting Health Equity”. The purpose of this qualitative research study is to explore the practice roles of PHNs during the pandemic in regard to their contribution to reducing barriers to Covid-19 vaccines and promoting health equity among equity-seeking clients.

Study Procedure

A total of 8-10 FIT PHNs will be recruited to participate in this study. If you decide to participate in this study, Yael Gelfman, the Principal Investigator, will meet with you via the Zoom platform to ask you questions about your experience working as a public health nurse on the FIT team. This interview will last approximately one hour. After that, Yael Gelfman will send your audio-recorded interview to a professional transcriptionist who will develop a transcript of the interview. The transcriptionist will sign an oath of confidentiality and be instructed not to include any identifying information. If you provide consent, Yael Gelfman will send you a preliminary analysis of the interview and a summary of the research findings via e-mail.

Description of the Recording Device

This study will use a digital voice recorder.

Benefits

Through participation in this study, you could help to examine PHN practice change during the Covid-19 pandemic and add to the existing body of knowledge about public health preparedness for communicable disease outbreaks, improve public health policy and sustainability, and build capacity for further research and evidence-based practice. A greater understanding of the PHNs' role in promoting health equity during the pandemic can contribute to excellence in nursing practice, improve client outcomes, and increase awareness about the importance of social justice and health equity action. You will also have the opportunity to share and reflect about your experiences with the researcher who is myself.

Possible Risks

Your participation in the study presents minimal risk to you. Discussing personal experiences working during the Covid-19 pandemic may remind you about sensitive or traumatic experiences or remind you about difficult times. You are not required to share information in the interview that you do not want to share. Yael Gelfman will provide a list of services that offer free counselling and support for nurses. The list of resources is attached to the thesis proposal as Appendix G.

Confidentiality

Yael Gelfman will maintain your confidentiality during the study. Your participation in this study will not be disclosed to anybody other than Yael Gelfman. To ensure your confidentiality, Yael Gelfman will conduct your interview in a private setting without interruptions. Yael Gelfman will assign your interview a code number and code name. Yael Gelfman, the transcriptionist, and the thesis advisor will have access to your audio-recorded interviews. Documents with your name such as the consent form and interview transcripts will be secured in a locked box in Yael Gelfman's home for seven years after the study is completed. All of the saved material will be destroyed based on University of Manitoba's procedure about destruction of confidential material in 2029. Electronic, de-identified data will be stored on Yael Gelfman's laptop until the study is complete. Only Yael Gelfman will be authorized to access study information on the laptop. To ensure confidentiality and security, this electronic device will be protected by an authorized, password-protected user account. Findings from this study may be published or presented at conferences, but your identifying information will never be disclosed.

Cost for participation

There will be no cost to you for participating in this study.

Honorarium for participation

Yael Gelfman will reimburse you with a \$25 gift card to Starbucks to thank you for your participation after the interview.

Voluntary Withdrawal from the Study

Your participation in this study is voluntary. You may withdraw your participation at any time before, during, and after the interview without negative consequences. You do not need to provide any reasons from withdrawing from the study. However, the data generated from your interview cannot be removed because it could be analysed at that time. If you wish to withdraw from the study, please contact Yael Gelfman, Principal Investigator at gelfmany@myumanitoba.ca or Dr. Lynn Scruby, Thesis Advisor at lynn.scruby@umanitoba.ca

Debriefing

Yael Gelfman will debrief with you immediately after the interview to see if you have any questions or concerns about the interview or anything about the study.

Dissemination

The data collected from the participants in the study will be analysed. Before the findings are shared publicly, a brief summary of the findings will be shared with you via e-mail. Next, the findings will be published in peer-reviewed journals, and presented at conferences or in academic or health care settings.

Questions

You are welcome to ask any questions regarding your interview. If any questions arise during or after the study, you can contact the above-named persons (Yael Gelfman – Principal Investigator or Dr. Lynn Scruby – Research Supervisor). Please refrain from signing this consent form until you were able to ask questions and have received acceptable responses to all of your questions. Your signature on this form indicate that you have completely understood the information about your participation in the research study and agree to participate as an informant. Your signature does not waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional duties. You are allowed to withdraw from the study at any time, and/or refrain from documenting your reflections without prejudice or consequence.

The University of Manitoba may view your research records to ensure that the research is being done safely and properly.

This research has been approved by the University of Manitoba Research Ethics Board (REB 1) and a written permission obtained from WRHA. If you have any concerns about this project, you may contact any of the above-named persons (Yael Gelfman – Principal Investigator or Dr. Lynn Scruby – Research Supervisor) or the Human Ethics Coordinator (HEC) at (204) 474-712/humanethics@umanitoba.ca .

A copy of this consent form has been given to you to keep for your records and reference. I have read the details of this above consent form. My signature below indicates my willingness to participate in this study.

Participant's signature _____ **Date** _____

Researcher's signature _____ **Date** _____

E-mail address: _____

Home address: _____

Contact number: _____

I wish to receive a summary of findings via email/post-office mail (circle one):

_____ Yes, please send them by email or posted mail at this address _____

_____ No, I would not like to receive a summary of the research findings

I am interested to review a preliminary analysis of my transcripts via email/post-office mail (circle one):

_____ Yes, please send them by email or posted mail at this address _____

_____ No, I would not like to review a preliminary analysis of my transcripts

Please fill out this consent form and send it to Yael Gelfman at gelfmany@myumanitoba.ca

Thank you for agreeing to participate in this study. We appreciate your time and willingness to share your experience about this important research inquiry.

Appendix D: Semi-Structured Interview Guide with Study participants

Thank you very much for participating in this study. I appreciate your time and contribution to my study. The title of my study is “Reducing Barriers to Covid-19 Vaccines Among Structurally Disadvantaged Populations: The Role of Public Health Nurses in Promoting Health Equity”. The purpose of this qualitative research study is to explore the practice roles of PHNs during the pandemic in regard to their contribution to reducing barriers to Covid-19 vaccines and promoting health equity among equity-seeking clients. Before we begin, I would like to provide a definition of health equity. Health equity is defined as “all people can reach their full health potential without disadvantage due to social position or other socially determined circumstance, such as ability, age, culture, ethnicity, family status, gender, language, race, religion, sex, social class, or socioeconomic status” (Ministry of Health and Long-Term Care, 2018, p. 5).

1. Can you tell me about your experience responding to the Covid-19 pandemic in your role as a PHN on the FIT team? What was involved in your day-to-day role?

Probe: What were your main responsibilities when working on the FIT team?

2. What were some of the physical locations that FIT PHNs provided services at?

Probe: Which of the above locations were the most/least beneficial and suitable to meet the goals of the FIT team and why?

3. In your opinion, what were the major barriers that structurally-disadvantaged clients experienced accessing Covid-19 vaccines during the Covid-19 pandemic?

Probe: Can you identify any additional barriers that prevented clients from accessing Covid-19 vaccines during the pandemic?

4. Do you feel you were able to address these barriers? If so, in what ways?

Probe: What made you feel that you have successfully addressed barriers that clients experienced when accessing Covid-19 vaccines?

5. If you were not able to address some or all of the barriers of disadvantaged clients, can you identify the reason/s that prevented you from addressing these barriers during your practice as a FIT PHN?

Probe: What made you feel that you didn’t address clients’ barriers to vaccines?

6. Can you describe the type of working relationship you established with your clients?

Probe: What helped you to promote trust and connection with your clients?

7. In your opinion, what health equity promotion activities you implemented when working as a PHN on the FIT team?

Probe: Can you tell me about specific nursing activities or interventions that you completed as a FIT PHN that helped promote health equity for your clients?

8. What did it mean to you to be part of the FIT team and work with equity-seeking clients?

Probe: Reflecting on your practice, what was the most rewarding part of working with clients who face barriers to Covid-19 vaccines?

9. How do you think your experience working as a FIT PHN during the Covid-19 pandemic has helped you prepare for the next pandemic?

Probe: What lessons have you learned from practicing as a FIT PHN during the pandemic?

10. Is there anything else you would like to add or share during this interview?



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Appendix E: Crisis or Counselling Resources for Nurses

Crisis Response Centre
817 Bannatyne Ave

Mobile Crisis Service
204-940-1781

Community Intake
204-788-8330

Manitoba Nurses' Union:
204-942-1320
Suite 301-275 Broadway



University of Manitoba | Rady Faculty of Health Sciences

College of Nursing
University of Manitoba
89 Curry Place
Winnipeg, Manitoba
Canada R3T 2N2
T: 204 474 7452
F: 204 474 7682
nursing@umanitoba.ca

Appendix F: Recruitment Poster

Reducing Barriers to Covid-19 Vaccines Among Structurally Disadvantaged Populations: The Role of Public Health Nurses in Promoting Health Equity



CALL FOR STUDY PARTICIPANTS
(60-MINUTE INDIVIDUAL INTERVIEWS VIA ZOOM)

Yael Gelfman, Masters student in the College of Nursing, Rady Faculty of Health Sciences is looking to recruit 8-10 Public Health Nurses who worked as part of the FIT outreach team during the Covid-19 pandemic

Participants will receive a \$25 Starbucks gift card

The study has been approved by the University of Manitoba Research Ethics Board 1

Contact Yael Gelfman at gelfmany@myumanitoba.ca to find out more about the study and your participation



University of Manitoba

Appendix G: Ethics Protocol Approval Letter



Human Ethics - Fort Garry
208-194 Dafoe Road
Winnipeg, MB R3T 2N2
T: 204 474 8872
humanethics@umanitoba.ca

PROTOCOL APPROVAL

Effective: November 10, 2022

Expiry: November 9, 2023

Principal Investigator: Yael Gelfman
Advisor: Lynn Scruby
Protocol Number: HE2022-0282
Protocol Title: *Reducing Barriers to Covid-19 Vaccines Among Structurally Disadvantaged Populations: The Role of Public Health Nurses in Promoting Health Equity*

Jonathan Marotta, Chair, REB1

Research Ethics Board 1 has reviewed and approved the above research. The Human Ethics Office (HEO) is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*- TCPS 2 (2018).

This approval is subject to the following conditions:

- i. Approval is granted for the research and purposes described in the protocol only.
- ii. Any changes to the protocol or research materials must be approved by the HEO before implementation.
- iii. Any deviations to the research or adverse events must be reported to the HEO immediately through an REB Event.
- iv. This approval is valid for one year only. A Renewal Request must be submitted and approved prior to the above expiry date.
- v. A Protocol Closure must be submitted to the HEO when the research is complete or if the research is terminated.
- vi. The University of Manitoba may request to audit your research documentation to confirm compliance with this approved protocol, and with the UM *Ethics of Research Involving Humans* [Ethics of Research Involving Humans](#) policies and procedures.



RENEWAL APPROVAL

Effective: October 12, 2023

New Expiry: November 9, 2024

Principal Investigator: Yael Gelfman
Advisor(s): Lynn Scruby
Protocol Number: HE2022-0282
Protocol Title: *Reducing Barriers to Covid-19 Vaccines Among Structurally Disadvantaged Populations: The Role of Public Health Nurses in Promoting Health Equity*

Human Ethics Office as designated by , REB1

Research Ethics Board 1 has reviewed and renewed the above research. The Human Ethics Office is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans- TCPS 2 (2022)*.

This approval is subject to the following conditions:

- i. Any changes to this research must be approved by the Human Ethics Office before implementation.
- ii. Any deviations to the research or adverse events must be reported to the HEO immediately through an REB Event.
- iii. This renewal is valid for one year only. A Renewal Request must be submitted and approved prior to the above expiry date.
- iv. A Protocol Closure must be submitted to the HEO when the research is complete or if the research is terminated.



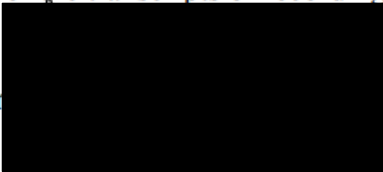
Appendix H: Transcriptionist’ Oath of Confidentiality

Reducing Barriers to Covid-19 Vaccines Among Structurally Disadvantaged Populations: The Role of Public Health Nurses in Promoting Health Equity

Transcriptionist’s Oath of Confidentiality

I understand that the digital audio-recordings given to me to transcribe are data from a research project and that according to ethical principles of the research process, I am bound to uphold the confidentiality of the research process. This means that I will keep confidential all matters pertaining to the identity of the participants involved in the project. I will discuss the research project only with the researcher and keep confidential all matters associated with this process.

During the course of the transcription of the interview recordings, in order to maintain confidentiality, I will refer to the participants and any other individuals mentioned by pseudonym only. I understand that participant’s names are not to appear on any transcribed data. Upon completion of my work on this project, I will return all research data to the researcher and will not keep any electronic or hardcopies of the transcripts or recordings.

Transcriber 

Witnessed by Researcher.....

Date..... May 1st 2023