

**PUBLIC HEALTH NURSES IN RURAL COMMUNITIES IMMUNIZE DURING  
INFLUENZA PANDEMICS: WHAT MEANING DO THEY ATTACH TO THE  
EXPERIENCE?**

**CARMEN A. TORRIE**  
**Bachelor of Science Nursing, University of Alberta, 1986**

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**CARMEN A. TORRIE**

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Dr. M. Sedgwick Supervisor	Associate Professor	Ph.D.
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Dr. L. Howard Thesis Examination Committee Member	Associate Professor	Ph.D.
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Dr. S. Yanicki Thesis Examination Committee Member	Adjunct Associate Professor	Ph.D.
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## **Dedication**

This work is dedicated to the public health nurses of southern Alberta, past, present and future. May your voices be heard in your devotion to the promotion of health for all.

## **Abstract**

The H1N1 influenza pandemic (pH1N1) in 2009 was the first opportunity in history to administer vaccine on a grand scale. In Alberta, Canada public health nurses (PHNs) were the primary administrators of pandemic vaccine through mass immunization clinics. This paper describes what the experience of immunizing in mass clinics during pH1N1 was like for rural PHNs in Alberta. Five rural PHNs, all female, two being residents of the communities in which they immunized, and all of them knowing community members that presented to the mass clinics, participated in an interpretive phenomenological study of the meanings they attached to their lived experience. Five meanings are revealed that rural PHNs attach to their pandemic immunization experience: unpreparedness, urbancentrism, mistrust, personal growth, and moral distress. The interpretation of these meanings is that rural PHNs were often caught between a rock and hard place as they lived their experience.

## Preface

A non-traditional thesis format is utilized for this paper. The goal of writing the chapters was to construct potentially publishable manuscripts. Since COVID-19 happened in Alberta as I was writing, and the topic was of potential immediate interest, Chapter Two was submitted and accepted for publication before my thesis and defense was completed. Chapter Two: Literature Review was co-authored by me, and my research committee members, and is published with the following citation: Torrie, C., Yanicki, S., Sedgwick, M., & Howard, L. (2021). Social Justice in Pandemic Immunization Policy: We're all in this together. *Nursing Ethics*, 0969733020983395. doi:10.1177/0969733020983395. *Nursing Ethics* is an international, peer-reviewed, nursing journal. As first author, I have permission from the *Nursing Ethics* journal to include the work in this thesis without the requirement of a letter. See green option republication standards for SAGE journals: <https://us.sagepub.com/en-us/nam/journal-author-archiving-policies-and-re-use>. As the manuscript was published with Vancouver reference formatting, I have altered the reference format to APA for inclusion in this paper.

The ideas for Chapter Two arose from a research committee meeting while preliminary findings were discussed. I expressed the idea that deciding who ought to receive pandemic vaccine first was frequently appearing as an issue of concern while I reviewed the transcripts of my first conversations with participants. This idea was built upon by Dr. Yanicki as she observed distributive justice principles dominated Alberta immunization policy decisions in 2009. Dr. Howard suggested social justice as a lens to critique immunization policy and suggested that the report commissioned by the Alberta

Government to evaluate the government's health response to H1N1 (Health Quality Council of Alberta, 2009) be reviewed to critique the pandemic response policies. I extensively reviewed literature on ethics to write this paper. I wrote the manuscript and received suggestions from all the co-authors on how to improve it with minor revisions. Suggestions for minor revisions from Nursing Ethics journal nursing peers and editor were made before final publication.

## **Acknowledgements**

It is with heartfelt gratitude that I acknowledge the people that contributed to this work. Dr. Monique Sedgwick, without your encouragement, patience, and perseverance, I would not have had the courage to start, and finish, this life-changing endeavor. As my supervisor, you worked so closely and attentively with me that I always felt buoyed and protected. You allowed me to keep stretching past the limits I sometimes thought I could not reach. Thank you.

Dr. Sharon Yanicki, you taught me what public health nursing is. I came to public health nursing over 30 years ago, so wide-eyed and green. You inspired me to see social justice, politics, and activism as essential to the nursing role. You also showed me how to give my first immunization. We're long past those days now, but it was your excellent introduction, and continued devotion, to the pursuit of health on a community level, that continues to inspire me. It has been an honor to work with you as a member of the research committee. Thank you.

Dr. Lisa Howard, your quiet kindness, incredible depth of knowledge, and uncanny ability to find words that capture the essence of ideas, is awe inspiring. As a member of the research committee, you modeled a calm, thoughtful, approach to explore the wonder and mystery of the research process. You helped me tap into that sense of wonder. Thank you.

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## Chapter One: Introduction

The fall of 2009 marked the first time in history that vaccinations to prevent pandemic influenza infection were available for distribution on a large scale in Canada (Low & McGeer, 2010). The H1N1 pandemic (pH1N1) reached Alberta earlier that year, and when the vaccine became available in October, public health nurses (PHNs), administered vaccine doses through mass immunization clinics. An evaluation of the pandemic response by health experts in Alberta indicated successes in immunization efforts with 66% of Aboriginal community members on reserve immunized, 52% of health care workers immunized and 37% of the total population of Alberta immunized such as were problematic (Health Quality Council of Alberta, 2010). However, several recommendations to improve immunization delivery were made, including, decision making based on facts supported by public health experts, consensus in determining most vulnerable populations to immunize, and structural improvements in tracking vaccine doses and capacity for electronic documentation (Health Quality Council of Alberta, 2010). For immunization in rural communities, the Council identified long distance travel, long working hours, complicated judgement situations when vaccines were restricted by narrow vaccine eligibility, and the wastage of vaccine not easily returned to central depots, as problematic (Health Quality Council of Alberta, 2010). As comprehensive as this review was, there was no discussion on how these problematic issues impacted rural immunizers. I addressed this gap by studying the meanings that rural PHNs in southern Alberta attached to their experience of immunizing in mass clinics during pH1N1.

In this introductory chapter, I will state the problem that initiated this study and I will provide background discussion around influenza pandemics, immunization in mass clinics, and rural nursing practice. The purpose and rationale of the study are then discussed. I will review my ontological perspectives going into the study process. I will then discuss how interpretive phenomenology fit the problem, context, and my ontological beliefs as the method to guide my study. The research question is then presented, followed by how I recruited participants. I then outline how I planned to collect the stories of the rural PHN pandemic experiences and how I worked with the story tellers and stories to uncover meanings. An interpretation of the meanings is offered. Ethical considerations, study rigour, and map for next chapters for the thesis conclude the introduction. I begin with discussing the problem that initiated this study.

### **The Problem**

As I read more government documents and scholarly literature about influenza pandemics, emergency preparedness, and the role of public health nurses in the 2009 pandemic, I found little that applied specifically to my interest in rural, mass immunization clinic work by PHNs. I present this as the problem that I decided to investigate further through this research study. To explain the problem in more detail, I will provide a background discussion on influenza pandemics, mass immunization clinics, and nursing in the rural context. Details on the purpose of the study and rationale follow.

### ***Background***

The topics I have chosen to present as background information reflect my assumptions about what is important in the contexts of pandemic immunization. These

assumptions are some of the forestructures that I attempt to be made transparent throughout this study. For this problem I chose to investigate, influenza pandemic, mass immunization clinics and nursing in the rural context are the topics I saw as important. Other readers may see other topics that could be discussed and debated.

**Influenza pandemics.** Rare events, occurring at a frequency of about 3 per century, influenza pandemics arise out of the introduction of a novel Influenza Type A virus into human populations (Ghendon, 1994; Kilbourne, 2006). There is controversy about a definition of pandemic, likely as a result of the assumption that pandemics are homologous events (Doshi, 2011). The COVID-19 pandemic, for example, is caused by a coronavirus. It is similar to an influenza pandemic in that both are easily spread through respiratory droplets and cause illness on a global scale (Koley & Dhole, 2020). Although this study started with a focus on the 2009 pH1N1, and the conversations that I held with participants were completed before COVID-19 arrived in the province, the influence of the COVID-19 pandemic resulted in a subtle change in my language by the time I wrote my findings. I speak more generally about pandemics in the findings; however, to be clear, the findings relate only to the pH1N1 immunization experience.

Influenza pandemics are often characterized by how deadly an effect they have on people. The Spanish influenza of 1918, for example, is described as a worst-case scenario related to the large number of deaths attributed to it (Barry, 2009; Taubenberger & Morens, 2006), while the influenza pandemics of 1957 and 1968 were not as deadly (Ghendon, 1994). The 2009 pH1N1 had even less mortalities than the events of 1957 and 1968 (Low & McGeer, 2010). Amid a pandemic, however, there is a sense of fear that a worst-case scenario could occur as when the organism that causes it is still infecting

people. Leung and Nicoll (2010) contend that the unpredictability of pandemic influenza is its most important characteristic and that decisions about how best to respond are dependent on the availability of, and open communication of, best evidence produced as the event unfolds.

**Mass Immunization Clinics.** Immunization is a key strategy to mitigate the morbidity and mortality associated with influenza illness, and is effective if vaccine is safely administered to a person before they are exposed to the virus (Santibañez, Fiore, Merlin, & Redd, 2009; World Health Assembly, 2011). Mass immunization clinics are the standard method to achieve large scale, rapid, and efficient, vaccine delivery (Beeler, Aleman, & Carter, 2011; Treadwell, 2006; Weber & Hammer, 2013), and are routinely used by PHNs for school, seasonal influenza, and communicable disease outbreak scenarios. The H1N1 pandemic was described by Masotti et al. (2013) as a traumatic experience for public health professionals that immunized in mass clinics in Ontario, even though H1N1 was ultimately deemed to be a low-impact event. The literature on influenza pandemics combined with mass immunization clinics prompted my curiosity to continue with the study.

For the role of PHNs in pH1N1, two authors provided more impetus for this study (Devereaux, 2015, 2016; Long, 2013). Both Long and Devereaux studied pH1N1 experiences of Canadian PHNs, however neither focused on just the immunization experience, and only Long (2013) included rural PHNs in her investigation of pH1N1. Devereaux (2015) conducted a descriptive interpretive study of the pandemic experiences of urban PHNs in Ontario. Long's study (2013) used a qualitative descriptive method and included the experiences of urban, rural, and remote PHN pH1N1 experiences. While



both studies were informative, neither was specific enough to just the rural mass clinic immunization experience, and neither addressed the Alberta experience. My study met that gap.

There are contextual issues of mass immunization clinics in Alberta that further warranted this study. The structuring of pandemic mass immunization clinics in Alberta in 2009, for example, was influenced by decision makers in the newly created, and recently centralized, administration of Alberta Health Services (AHS). In its infancy, the organization lacked an amalgamated pandemic preparedness plan that addressed the needs of the province as a whole (Health Quality Council of Alberta, 2010). The lack of organizational plans thus contributed to the contextual environment in which rural PHNs provided services. Therefore, in 2009, amid the context of this complex, rare, potentially deadly, far-reaching, and unpredictable disease, rural public health nurses ministered to the health needs of rural Albertans.

**Rural Nursing.** The definition of rural that I chose to frame my study is offered by du Plessis, Beshiri, and Bollman (2001), stating that rural people live in towns and municipalities outside the commuting zone of larger urban centres. Urban centres are further described as centres with populations of 10,000 people or more. This definition was chosen because it is one that Statistics Canada cites in documents, and, it was simple enough for me to apply to potential pool of participants. With one in five Canadians living in rural areas, and 16.9% of Albertans living in rural areas (Minister Responsible for Statistics Canada, 2012) a significant number of Canadians could potentially receive health services from rural PHNs. With a population of about 4.06 million, the number of rural dwellers in Alberta is approximately 686,000. Rural nurses were chosen for this

study because they serve a significant portion of the population, and, they occupy a unique practice setting (Long & Weinert, 1989; Macleod et al, 2008; Meit & Knudson, 2009). Some of the concepts identified as defining rural nursing practice include: distance, old timer/newcomer, outsider/insider, lack of anonymity, and professional isolation (Lee, Winters, Boland, Raph, & Buehler, 2018). These ideas will be explored and discussed as they intertwined with pH1N1, mass immunization clinics, and some of the contextual issues that influenced the experiences of rural PHNs in southern Alberta.

### **Problem Statement**

Based on the limited literature around the phenomenon of rural PHN immunization experiences during the 2009 H1N1 pandemic and a review of the background literature conducted before the study, the following problem statement defined this study:

Given the observation that immunizing in Canada during pH1N1 was difficult for some public health professionals (Masotti et al., 2013) despite H1N1 being a low impact event, and given the observation that rural PHNs, could be stretched by limited resources and large geographic areas to cover (MacLeod, Browne, &Leipert, 1998), the experience of rural PHNs that lived pandemic immunization in mass clinics is important to study and understand. Public health nurses tend to know their community members and communities well and, they could have family or close friendship ties that influence immunization service delivery. The pressure to be accountable for the services that are delivered in the context may be more intensified than in environments where health professionals are at arm's length (Mills, Francis, & Bonner, 2007). Accustomed to autonomy and insider status, deferring to a centralized management system and having to

implement strategies that perhaps did not fit well with rural service delivery, rural PHNs may have felt the difficulties of immunizing during the pandemic in a unique way.

There is potential for this study to inform the immunization practices of other PHNs. History tells us that future influenza pandemics are rare but inevitable events that are potentially catastrophic. As we study how to respond to the phenomenon, there is potential to mitigate loss of life. Strategies to save lives using immunization occur at a community level and are delivered largely by the PHNs who work in, and know, these communities. The perspective of these nurses can contribute to a greater understanding of pandemic immunization responses.

### **Study Purpose and Rationale**

The potential reduction in morbidity and mortality that immunization provides, and the key role that public health nurses play in delivering influenza immunizations during pandemics, merits examination. Limited nursing research currently exists on the rural public health nurse experience of pandemic immunization clinic work. It is important to bring forward the experiences of the rural nurses who work at the intersection of the complex features that constitute mass immunization clinics in a pandemic scenario. The purpose of this study was to identify the meanings that rural public health nurses in southern Alberta attached to their experience of immunizing in mass clinics during the 2009 H1N1 influenza pandemic.

### **Research Approach**

The choice of approach to study this question was informed by my ontological perspective, my understanding of methodological options, and collaboration with research committee members.

### ***Ontological Perspective***

My belief about truth is firmly situated in constructivist philosophy, described by Guba and Lincoln (as cited in Appleton & King, 2002) and predicated on the idea that truth is a construction that occurs as people live and interact within their social worlds. Through a naturalist approach to research (Appleton & King, 2002), the researcher and participants are interrelated, promoting a co-construction of knowledge that is context dependent. I am a public health nurse with immunizing experience in urban pH1N1 influenza immunization clinics. I have worked in rural public health settings, and know many rural PHNs, in southern Alberta. A constructivist perspective allowed me to embrace my experience and use it to my advantage. The working relationships I have fostered over the years facilitated recruitment of nurse participants and set the stage for a deep understanding of the immunization phenomenon. I suspected that mass immunization clinics during the pandemic were significant events for rural PHNs and that the learnings from these events were important to share.

The goal of research using an underpinning of constructivist philosophy is “to understand the variety of constructions that people possess, trying to achieve some consensus of meaning, but always being alert to new explanations with the benefit of experience and increased information (Guba & Lincoln, 1994)” (Appleton & King 2002, p. 642). In consideration of my research question and my ontological perspective, an interpretive phenomenological approach presented itself as the most appropriate way to address this research endeavor. What follows is a description of how this methodology was applied to the study.

### ***Interpretive Phenomenology***

An interpretive approach to phenomenology, as described by Heidegger (Mackey, 2005; Smythe, Ironside, Sims, Swenson, & Spence, 2008; Tuohy, Cooney, Dowling, Murphy, & Sixsmith, 2013; van Manen, 2017) allowed me to explore the phenomenon of immunizing during pH1N1 within a temporal context. Moreover, an interpretive phenomenological approach encourages a conscious reflection on aspects of the event that may not be readily apparent to participants at the time, yet, have subsequently become embodied in their work. Rural PHNs had opportunity to re-visit and describe their pH1N1 clinic experiences in this study. In addition, there was probing to move past simple description and uncover the deeper meanings that impact present practice. Conroy (2003) has informed the translation of this philosophically based form of inquiry into a methodology a novice can apply.

### **Research Question**

The central research question for this study is: What meanings do rural public health nurses in southern Alberta apply to their experience of immunizing during the 2009 H1N1 influenza pandemic? The sub-question for the research is: What was it like to be a rural public health nurse in mass immunization clinics during the pandemic?

### **Participants**

I recruited participants from the Southern Alberta community of rural public health nurses through purposeful and snowball sampling (Creswell & Poth, 2018). Recruiting rural public health nurses with immunization experience during the 2009 H1N1 mass clinics was facilitated by my being a resident of Southern Alberta, a public

health nurse, and a past immunizer during the 2009 H1N1 influenza pandemic. The connections that I had nurtured over the years enhanced the recruitment process.

Eligibility for participation was restricted to public health nurses who worked half, and, up to, full-time hours, in rural pandemic immunization clinics in 2009. As 10 years had passed since the clinics were held, I also sought participation of retired nurses who worked rural immunization clinics. Wall, Edwards, and Porter (2007) utilized oral histories of retired nurses to study the education experience of nurses across time. These researchers contend that the experiences of eyewitnesses of past events can provide insight into long-term meaning. See Appendix A: Participant Demographics for a chart that describes the 5 PHNs that participated in this study.

### **Story Collection**

Stories were collected with a process of talking, writing and reflexivity. Two conversations with each rural PHN occurred during this study to collect their stories about what it was like to immunize during pH1N1. The first conversations focused on description and the second moved deeper towards meanings and interpretations. A period of reflection and analysis of the recordings and the transcripts informed how the questions for the second round of conversations. The conversations were digitally recorded and I transcribed each one. I used semi-structure questions for each conversation (See Appendix B: Conversation Questions, for the questions I used for each round of conversations). The conversations were open enough that participants were free to take the conversation in directions that they chose. My skills in participating in the conversations to promote movement beyond description and into meaning improved as the study progressed.

Time and space are essential aspects of interpretive phenomenological study in that they influence the context of being in the world (McConnell-Henry, Chapman, & Francis, 2009; Tuohy et al., 2013; van Manen, 2017). Therefore, to promote an immersion in what it was like to immunize in 2009, conversations were held, whenever possible, in the community spaces in which the rural PHNs worked. The PHNs walked with me through their immunization spaces and described how the spaces were set up and used. This encouraged an entering of a present at hand state of mind and also the notion that the participants and I were together on a path of uncovering meanings (Conroy, 2003). Glesne (2016) encouraged using artifacts to understand the history of a phenomenon and to facilitate reconstruction of a time in history. I used pandemic influenza clinic newspaper articles from the *Lethbridge Herald* or *Sunny South News* (see Appendix C), during our initial conversations as artifacts to encourage further present-at-hand engagement.

I wrote in a field journal before and after each conversation the PHNs. I summarized field notes into a research journal. The research journal also contained entries about the research process and decisions I made as the study evolved. An entry into the research journal happened after most research committee meetings. The research journal is encrypted and will be saved for five years after the completion date of this study. I shared some transcripts with my research supervisor and I wrote and shared summaries of the conversation with all research committee members.

I strove for reflexivity in all my writing. Reflexivity, as described by Berger (2015), is inner dialogue about what how beliefs, assumptions, and positionality might be color the research process and the research findings. This idea is consistent with interpretive

phenomenology as the researcher is not seen as an objective observer, but a participant in, the research study (Conroy, 2003). Further, I utilized suggestions from Koch (2006) and wrote on the following topics: access (or gaining entrée); setting description; experience (my reflections on the research process and reactions to same, my reflections on any dilemmas that arose); issues (concepts or ideas that drew my attention or that of my participants); participant as co-researcher (how I fostered this); and, prejudices (identifying elements of my personal and professional background that influenced the study). I discuss next how I continued the work of uncovering the meanings that PHNs attached to their pandemic immunization experience.

### **Uncovering Meaning**

Embarking on the pathway toward uncovering meaning in interpretive phenomenology requires a commitment to thinking, and trusting that the insights that already exist, but are yet to be revealed, will emerge (Smythe et al., 2008). Therefore, working with the stories provided by the rural PHNs required many hours of contemplation and patience. I utilized the hermeneutic spiral circle, as described by Conroy (2003), to reflect on transcripts, notes, and journal entries. I also wrote notes in an analysis chart where I broke down the transcribed conversation into analyzable chunks. This will be discussed further in Chapter Three: Methodology.

The thinking involved a process of focus on details such as a sigh or laugh in the conversation transcripts, to a widening consideration of the whole of conversations with the PHNs. Consultation of scholarly literature and feedback from research committee members expanded the thinking process. This back and forth among the people in this study, as well as researchers pursuing understanding in relevant pandemic immunization



studies, occurred throughout the study; hence, the spiral metaphor. Interpretations emerged in this process.

### **Five Meanings**

I found intertwining moments of unpreparedness, urbancentrism, mistrust, personal growth and moral distress to be meaningful in the life experience of rural PHNs in Alberta who immunized in mass clinics during pH1N1. Chapter Four: Findings, describes the meanings in a collection of three narratives. I interpreted these meaningful moments as like being stuck between a rock and hard place. Nursing obligations and relationality (G. H. Doane & Varcoe, 2007, 2021; Dove et al., 2017) are the tenets that underpinned this interpretation.

### **Implications and Recommendations**

The implications of this study for planning of future mass immunization clinics include a need greater understanding of the unique closeness that rural PHNs can have with rural community members, and, consideration of this unique closeness in immunization policy making. This closeness creates nursing obligations that continue well after the pandemic immunization event is over. If trust is lost in the rural PHNs, for example, confidence in the benefit of vaccination could be undermined during, and after, a pandemic. Recommendations for nursing practice, education, and research that arose from the study relate to increasing knowledge and skills around relational nursing practice. Details are presented in Chapter Five: Implications and recommendations.

### **Ethical Considerations**

I used the Canadian Tri-council policy statement for the ethical conduct of research involving humans (Canadian Institutes of Health Research, Natural Sciences and

Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada, 2014) as well as the Canadian Nurses Association code of ethics for registered nurses (2017) to plan and implement this study. Approval for the study was granted through the University of Alberta Research Ethics Board for research involving human subjects, REMO (Research ethics management online) ethics identification number Pro00085270. Approval to speak with Alberta Health Services employees for this study was received. Primary ethical considerations from the Canadian Tri-Council statement that I anticipated and addressed included consent; fairness and equity in research participation; privacy and confidentiality; potential benefits to participation; and, potential harms to participation. See Appendix C for the Participant Consent Form utilized in this study. Close contact was maintained with my research supervisor to ensure that any unanticipated ethical issues were discussed promptly.

### **Rigour**

For an interpretive phenomenological nursing study, De Witt and Ploeg (2006) suggested a framework for expressions of rigour that promotes a “balance between representing the research processes and outcomes” (p. 223). I strove to make evident Heidegger’s conception of interpretive phenomenology, as informed by Conroy (2003), at every stage of this study. The expressions of rigour in De Witt and Ploeg’s framework (2006) that could be utilized to evaluate the rigour of my work include “balanced integration, openness, concreteness, resonance, and actualization” (p. 224). Rigour is discussed further in Chapter Three: Methodology.

## Summary and Thesis Layout

This introductory chapter described the problem of a lack of understanding of what meanings rural PHNs in Alberta attached to their experience of immunizing in mass clinics during pH1N1. The 2009 pH1N1 pandemic was the first event where immunization of any person six months of age or older in the province were eligible for vaccine, with vaccination on a mass scale and timely manner expected. After reviewing scholarly literature about the problem, I drafted my problem statement and chose interpretive phenomenology as the method of study. Five rural PHNs with pH1N1 mass clinic immunization experience told their stories. I recorded, transcribed, and reflected on these stories. I wrote extensively on the progress of the study and on my beliefs, assumptions, and position as a PHN colleague and researcher. Five meanings were uncovered: unpreparedness, urbancentrism, mistrust, personal growth, and moral distress. My interpretation of these meanings is that rural PHNs were frequently caught, or stuck, between a rock and hard place while they lived their experience. These findings have implications for the future immunization clinic work during pandemics related to understanding the closeness of rural PHNs to community members and the nursing obligations that arise from this closeness. Recommendations for nursing practice, education, and research include strategies to increase knowledge and skills in relational nursing.

The chapters that follow include Chapter Two: Literature Review, Chapter Three: Methodology, Chapter Four: Findings, and Chapter Five: Implications and Recommendations.

## Chapter Two: Literature Review

As populations around the globe experience the deadly COVID-19 pandemic, the prospect of relief through immunization brings hope that the disease might be mitigated. Vaccine administration, however, is a complex and ethically nuanced challenge (Barr et al., 2008; Bennett & Carney, 2010; Kotalik, 2005; Vawter, Gervais, & Garrett, 2007). The immunization campaigns to combat the 2009 influenza pandemic (pH1N1) brought these challenges to the fore as immunizers attempted to deliver the vaccine on a scale never attempted in the past (Low & McGeer, 2010). Lessons learned, and further insights from these past experiences, could prove valuable for policy makers contemplating COVID-19 pandemic immunization campaigns.

In Canada, nurses are the largest group of healthcare professionals involved in front-line pandemic responses (Devereaux, 2015) and in Alberta, public health nurses were the primary administrators of pH1N1 vaccine (Health Quality Council of Alberta, 2010). As a contribution to nursing practice, this commentary is constructed by nurses with experience in, and/or knowledge of, pandemic immunization, public health, rural health, and the ethical underpinnings that inform nursing care in these contexts. To accomplish this critique, we analyzed pH1N1 immunization policy decisions of the Alberta provincial government leaders as documented by the Health Quality Council of Alberta (2010). This government commissioned, expert review of the province's pH1N1 health responses, provided a comprehensive account of immunization decisions. We analyzed ethical issues of vaccine delivery pertaining to the first ten days of when the immunization campaigns and vaccine delivery started in the province. Based on our analysis, we concluded that policy decisions regarding immunization delivery were

fraught with issues of power and based on a distributive justice framework. Our analysis, therefore, was guided by a postmodernist world view (Pesut & Johnson, 2013), a feminist theory of relational ethics (Baylis, Kenny, & Sherwin, 2008), and a social justice ethical stance (Powers & Faden, 2008). Predominate features of these approaches include inclusivity and shared decision making.

Over a ten day period of immunization policy making in 2009, the provincial government made three pH1N1 immunization policy decisions: to offer vaccine only through mass immunization clinics; to open those clinics to anyone who wanted to be vaccinated, and then; to severely restrict vaccine distribution to at-risk individuals (Health Quality Council of Alberta, 2010). This fast moving and conflicting direction was confusing for health professionals and the public alike, particularly when there was evidence that the Public Health Agency of Canada provided officials in Alberta with a listing of risk factors for pH1N1 illness that could have guided vaccine distribution from the start (Health Quality Council of Alberta, 2010). Through discussion of the problems associated with the Alberta experience, particularly for vulnerable populations, we believe our analysis can support policy and decision makers as they begin to grapple with immunizing Canadians when a vaccine becomes available for COVID-19.

### **Assumptions**

The Health Quality Council of Alberta (2010) reported an absence of an agreed upon ethical framework for policy makers to refer to at that time. Of further concern, personnel interviewed in their review process did not speak to the value of such a framework. The first two policy decisions made in 2009, appeared however, to be based on an egalitarian form of distributive justice. In this form of justice, community members

were considered morally equal and thus deserving of an equal share of material goods (Lamont & Favor, 2017). The policy decisions to provide free vaccine through mass immunization clinics, and to open the clinics to anyone that wanted it, demonstrated congruence with these principles. Described as impersonal and top-down in process (Shanner, 2008), distributive approaches may have appeal in their simplicity and the inferred understanding that experts know what is best. The decision to allow open attendance was short-lived, however, when after five days of operation, crowding at mass immunization clinics and concerns about insufficient vaccine supply prompted its discontinuation (Health Quality Council of Alberta, 2010).

The third policy direction aimed to support a needs-based form of distribution justice, by vaccinating according to risk (Hope, Østerdal, & Hasman, 2010). It appears the approach originally suggested by the Public Health Agency of Canada was revisited when problems arose, however, it was modified to a slow release of vaccine according to a hierarchy of risk factors. For example, on one day nurses were immunizing pregnant women, then on the following day access was expanded to include pregnant women and children under the age of three, and so on. This gradual release left some vulnerable people at risk while they waited for their turn. It was also problematic when, for example, family groupings presented to mass immunization clinics for immunization. Notably, M. J. Smith, Thompson, and Upshur (2019) found that some pandemic preparedness health policy makers in Canada defaulted to this kind of needs-based approach as the only option for deciding who might get vaccinated first. Significantly, these authors were interested the role of social justice in public health policy making. Their findings highlighted a dominance of the principles of distributive justice in the minds of some

pandemic-focused public health policy makers, leading them to question why social justice might not be applied to a pandemic immunization campaign. We share this view.

Given the assumption that the three policy decisions regarding vaccine delivery in Alberta during pH1N1 were based on a distributive justice approaches, and that they were problematic in some ways, our analysis seems warranted. The apparent lack of committed ethical approach to policy in Alberta in 2009, and the suggestion that social justice could inform pandemic responses furthers the impetus for analysis. We approach this analysis with the following thesis statement and description of the philosophical underpinnings that inform it.

***Thesis statement***

We suggest public health ethics (Powers & Faden, 2008) and rural health ethics (Simpson & McDonald, 2017), both informed by social justice, are alternative perspectives that may better inform policy making in a pandemic response. These perspectives suggest that individual autonomy is of lesser importance than the social realities that situate individuals in communities. In a pandemic, individual autonomy must at times be constrained to support the common good. Social inequalities in society constrain equality in opportunity and access for some groups. Additionally, to achieve an effective and fair response to a community crisis, meaningful inclusion in policy making is not only possible, but necessary. Health equity (Anand, 2002; Braveman, 2006; Sen, 2002; Starfield, 2002; Whitehead, 1991) is an important concept that informs these perspectives. Health equity is achieved when populations that are defined socially, economically, demographically, or geographically do not experience differences in health outcomes as a result of modifiable system structures such as health policy (Starfield,

2002). These ethical approaches, and their focus on health equity, are consistent with the goal of achieving health for all.

Our thesis, therefore, is that social justice can, and ought to, inform vaccine delivery during a pandemic. We cannot allow some individuals to be invisible to policy makers as they may belong to vulnerable groups that lack the resources to compete fairly with the privileged (DeBruin, Liaschenko, & Marshall, 2012; Gostin & Powers, 2006; Marmot, Friel, Bell, Houweling, & Taylor, 2008; Powers & Faden, 2008). We define vulnerable groups as those at risk of serious health complications or death from a pandemic illness as a result of intersecting determinants of health (Hankivsky & Christoffersen, 2008). Examples of determinants of health that compound risk when they intersect in individuals or groups include gender, age, race, ethnicity, social class, socioeconomic status, disability, and geography (Hankivsky & Christoffersen, 2008; Hawe, 2009; Reid, 2019). We will demonstrate how social justice can be enacted during a pandemic by first describing the philosophical, theoretical, and ethical stances that support it. Our aim is to advocate for thoughtful reflection and debate on how future pandemic immunization policy could evolve to include vulnerable groups.

***Philosophical stance: Postmodernism***

A postmodernist world view embraces the notion that our understanding of the world is a construction of social and political environments (Mitchell, 1996; Pesut & Johnson, 2013). It is, therefore, a constructivist view in which subjective, contextual factors such as social groups, and group decision making, determine what is true or right in a certain time and place. The process of policy making in this world view is primarily bottom-up as it presumes dialogue and inclusion, reinforcing the idea that even though



we are all different people, we are all in this world together (Rodney, Harrigan, Bashir, Burgess, & Phillips, 2013). The interests of groups, over that of individuals, is evident in this perspective. In addition, outcomes, though important, are of lesser importance than the process of decision making in this world view.

Other world views, such as modernism, prioritize the autonomy of the individual, their separateness from groups, and their personal responsibility in pursuing health (Gostin & Powers, 2006; Rodney et al., 2013). The pursuit of individual wealth and happiness, globalization, privatization of public services, and a pursuit of efficiency are tied to this world view (McGregor, 2001; Rodney et al., 2013). Haddow (2016) provided a description of the long history of government policies in Alberta addressing cost cutting or privatization of public services in favor of free market economics. It not surprising, therefore, in assessing the strategic plan of Alberta Health Services (AHS) in 2009, to find the following values congruent with a modernist world view: valuing each other and each client as individuals, and; encouraging/supporting people to take responsibility for their own health (Alberta Health Services, 2009). This rugged individualist stance seems to be so engrained in Alberta culture that it has become an unchallenged or unexamined norm.

It is important, however, to be aware of, and be transparent about, the world views that influence what, and how decisions are made. We propose that nurses, in rural, public health contexts, might embrace a postmodernist world view. This assumption comes from our analysis of the Canadian Nurses Association's code of ethics (Canadian Nurses Association, 2017) and statement on social justice (Canadian Nurses Association, 2010), the definition of public health as adopted by the Canadian Public Health Association

(Canadian Public Health Association, 2010), and the recent conceptualization of rural health ethics by Simpson and McDonald (Simpson & McDonald, 2017). G. H. Doane and Varcoe (2007), and Doane, Pauly, Brown and McPherson (2004), scholars in public health, nursing, and ethics, argue that a postmodernist world view could be embraced by nurses in these contexts. These authors describe social and political structures as essential components to health care delivery with wording such as social justice, organized efforts of society, place, community, relationships, and health for all. Consistent with these scholars, we argue that a health threat as encompassing as a pandemic requires rural public health nurses be guided by a postmodernist world view. Such a perspective best supports a collaborative and inclusive approach to intervention rather than one that leaves individuals on their own to navigate their survival.

***Theoretical stance: Relational ethics***

If we suppose that groups, context, dialogue, and inclusion are what matter in our world view, an ethical framework that details how these values could be operationalized is beneficial for policy makers. Baylis et al. (2008) offer this in their relational ethics framework. Based on the values of relational personhood, relational solidarity, and social justice, their model veers away from individualistic interests that are featured in other frameworks. The concept of inclusiveness in this framework rejects othering of people in any way, reinforcing a vision that we are all in this together (Anderson, Rodney, Reimer-Kirkham, & Browne, 2009; Baylis et al., 2008; Powers & Faden, 2008; Yanicki, Kushner, & Reutter, 2015). Concurrently, there is acknowledgement that people are members of groups and that these groups can occupy spaces of privilege or disadvantage. The cornerstone of this framework is that policy ought not to put groups in a position

where their interests, and larger society interests, compete for public goods such as pandemic vaccine. The underlying assumption of this statement is that disadvantaged groups cannot compete fairly with the privileged, so they ought not be put in such a precarious position.

Notably, this framework is proposed for public health practice at all times, not just during a pandemic (Baylis et al., 2008). Indeed, the community development that comes from collaboration, increased awareness of vulnerable groups, and increased creativity in service provision, could facilitate effective pandemic responses. In contrast, Moodley, Hardie, Selgelid, and Waldman (2013) argue that public health emergencies are special situations that require distributive justice approaches to vaccine distribution by virtue of scarcity of vaccine. Social justice, therefore, is suggested as appropriate only in times of less urgency and demand. Our objection to the default to distributive justice is that it shifts the focus to individuals, prioritizes equality over health equity, and is predominately a top-down process. Alarming, a distributive justice approach may also justify prioritization of vaccine to those deemed most essential to economic and social functioning, or, promote vaccination of individuals against their will (Doane et al., 2004). A consistent commitment to relational ethics could be a long-term remedy to the health inequalities that vulnerable groups experience and, ensure that they are not forgotten, or disrespected, when emergencies arise.

***Ethical stance: Social justice***

Social justice is achieved when the burdens and benefits associated with living in a community are equitably shared (Beauchamp, 2012). Deepening our understanding of social justice as it translates to service delivery, Smith, Baluch, Bernabei, Robohm, and

Sheehy (2003) identify two important underlying assumptions: firstly, that social justice will not be achieved if systemic inequities exist in a community that favor some members of a community, while oppressing others, and; secondly, power, resources, and individual access to these amenities are inevitably inequitable. For nurses, particularly public health and rural practitioners, we suggest that these assumptions align with the reality of the unique characteristics of a rural place that make rural populations more vulnerable to health inequities during a pandemic (Bushy, 2014; Meit & Knudson, 2009). The features that contribute to this increased vulnerability include sparse health service resources, large geographical areas to service, lower levels of education, limited employment opportunities, increased rates of poverty and, a higher prevalence of chronic disease (Bavington, 1994; DesMeules & Pong, 2006; Health Quality Council of Alberta, 2010; National Advisory Committee on SARS and Public Health, 2003). Furthermore, we expand the understanding of vulnerability when we consider the effects of colonialism on First Nations peoples and how this contributes to vulnerability during a pandemic. First Nations peoples are consistently shown to be disproportionately affected by pandemic illnesses (Baylis et al., 2008; Boggild, Yuan, Low, & McGeer, 2011; Hutchins, Fiscella, Levine, Ompad, & McDonald, 2009; Hutchins, Truman, Merlin, & Redd, 2009; La Ruche, Tarantola, Barboza, & Vaillant, 2009; Low & McGeer, 2010). We also consider the vulnerability of developing nations (Marmot et al., 2008) if a social justice approach informs policy decisions on macro levels. If contextual factors are not taken into consideration with policy making, rural populations, First Nations peoples, or any vulnerable population on a global level, will be challenged to equitably receive their share of community resources.

The values in a social justice approach to policy making proposed by Powers and Faden (2008) include respect for others, personal security, attachment to others, facilitating reasoning capacity and self-determination in pursuing one's destiny. To complement, rural health ethicists Simpson and McDonald (2017) suggest the values of place, community, and relationships are of central concern. Both these perspectives are relational, group-orientated, and concerned with inclusiveness. In a pandemic situation there are going to be challenges with shortages of supplies, and difficult decisions will need to be made. A process that is inclusive, with a balance of input from the bottom and top, is more likely to root out the unique challenges of service delivery for different groups, to foster creativity in service provision, and to improve acceptance of these difficult decisions.

We identified two groups already incorporating social justice in pandemic planning, one in the state of Minnesota (Vawter et al., 2007) and the other in the country of New Zealand (Ministry of Health, 2017), and their approaches provide valuable insights. Vawter et al. (2007) demonstrated a collaborative approach to how to ethically distribute vaccine in a worst-case scenario pandemic when they engaged a variety of community groups in discussions. Through this consultation process, they found that social cohesiveness was the preferred value with which to judge between possible policy options. Consensus, therefore, appears to be an important component of the process. Indeed, Schwartz and Yen (2017) contend that consensus-based decision making among government and non-government persons, though difficult, is a promising strategy for future pandemic responses. They argue, and we agree, that governments have not

managed previous pandemics well, and that the meaningful participation of community groups in the process could remedy this.

The other leader in promoting social justice is the Ministry of Health in New Zealand (2017). The Ministry's initiatives demonstrated how populations impacted by colonialism were included in the pandemic planning for their country. Significantly, they describe a robust ethical framework that includes words such as open, inclusive, respect, fairness, neighbourliness, and unity. There is, therefore, precedent for adopting a social justice perspective in pandemic responses. Such an approach is different from traditional ways of delivering vaccine, however, a pandemic is a unique situation that puts global populations at risk. The problems with vaccine distribution in Alberta in 2009, described below, will illustrate this.

### **Alberta's immunization policy in 2009**

It is important to note contextual elements that may have influenced pandemic decision makers in 2009. As already mentioned, advice from the Public Health Agency of Canada regarding risk factors for pH1N1 did not result in immunization according to risk in the initial stage of the campaign (Health Quality Council of Alberta, 2010), suggesting others had more influence over policy decisions in Alberta. The Health Quality Council did not identify who these others were, noting only that direction came from a high-level person or persons (2010). Extensive restructuring of health services started in April of 2009, mere months before vaccines became available. Musto, MacDonald, Ulrich, and Fonseca (2020) suggest that this restructuring may have contributed to some of the misguided decision making about pH1N1 vaccine delivery. Indeed, in evaluating the 18 recommendations from the Health Council review, it is evident that communication, role

clarification, and collaboration among stakeholders were challenging. All these contextual factors had potential to complicate the pandemic response. Significantly, a central theme in the Council's report was that "...the pandemic was not the emergency. Rather, the challenge was managing the immunization clinics (p.37)" (Health Quality Council of Alberta, 2010). Our analysis of the following immunization policy decisions concurs with this assessment. We offer critique of the three policy decisions that started the immunization campaign from a nursing perspective, and using a social justice lens, next.

### ***Offer Vaccine Only Through Mass Immunization Clinics***

Public health nurses (PHNs) were the sole providers of vaccine when pH1N1 immunization started, and mass clinics were the only venues of administration (Health Quality Council of Alberta, 2010). This decision limited access to vaccine to persons that could physically get to a mass clinic, and then stand in line for many hours. Consequently, many vulnerable community members were faced with barriers to receive vaccination. For example, elderly persons in communal living situations, the disabled, and those without the economic means to leave work or travel to a clinic, were left without access. Uscher-Pines, Barnett, Sapsin, Bishai, and Balicer (2008) refer to this as a Darwinian, or, a survival of the fittest, approach to vaccine delivery. This approach is individualistic, competitive, and, it appears, made by top-down authorities that lacked an understanding of the scope and complexity of vaccine delivery in a pandemic. Although mass immunization clinics are cost-effective, efficient, and safe (Sander, 2010; Weber & Hammer, 2013), they cannot be the only strategy employed in a pandemic response. This simply is not socially just.

### *Anyone Wanting Vaccine Will Be Accommodated*

If community members in Alberta could get to the mass clinic, they were not to be turned away (Health Quality Council of Alberta, 2010). This decision could have been surprising and confusing for public health professionals, and members of the public, since it is standard practice to identify those in a community who are at most risk to contract a vaccine preventable disease and then define them as eligible for vaccine (Immunization Program Standards and Quality, 2017; National Advisory Committee on Immunization, Public Health Agency of Canada, & Committee to Advise on Tropical Medicine and Travel, 2020; Pan-Canadian Public Health Network, 2017; Tuite, Fisman, Kwong, & Greer, 2010). Although a social justice approach would identify high risk groups over individuals to receive vaccine first, there has always been an attempt to roll out vaccine gradually due to the logistical challenges of vaccine supply chains, maintaining refrigeration of the vaccine, and the limited numbers of skilled practitioners that can safely inject vaccines. Not surprisingly, community members observed problems with the mass clinics. The media reported dis-satisfaction with the crowding and long queues (Luth, Jardine, & Bubela, 2013) and reports of a professional hockey team receiving vaccinations in a private mass clinic created an uproar about queue jumping (Health Quality Council of Alberta, 2010). It was obvious that demand for vaccine was high at the time; resources, such as immunization personnel, were limited; and that those with privilege could get special accommodation.

Of interest, a resource that was not limited, over the long term of the immunization campaign, was vaccine (Health Quality Council of Alberta, 2010). In fact, at the end of the immunization campaign, just over one million doses of vaccine were left



over (Health Quality Council of Alberta, 2010). There was great concern, however, that there could be a shortage of vaccine among decision makers in Alberta (Health Quality Council of Alberta, 2010). Although hindsight proved this concern over a vaccine shortage was unsubstantiated, the issue of who gets vaccine first is revealed as one that could not be avoided simply by opening clinics to anyone that desired it. A social justice approach to vaccine delivery acknowledges that resources can be limited in a variety of ways, and, suggests that groups at high risk of illness or death ought to be prioritized to receive vaccine first. If the unfortunate circumstance presents where all who want vaccine cannot be immunized due to limited resources, at a minimum least we can claim we targeted those at most risk of illness or death.

### ***Gradually Release Vaccine According to High-Risk***

The decision to reopen clinics to high-risk groups, phased in over several weeks was problematic. High risk groups were narrowly defined by age (under 4 years, and, under 65 years with underlying health conditions), occupation (health care workers), pregnancy status, and on-reserve indigenous persons (Health Quality Council of Alberta, 2010). This ranking is more individualistic than group-oriented, exclusive, and privileged health care workers.

To illustrate the problem with focusing on individuals, consider families, a natural grouping in communities, as they presented to clinics only to discover some individuals were ineligible for vaccine that day (Health Quality Council of Alberta, 2010). In order to protect all family members, multiple visits to mass clinics over several weeks was required. This unfairly burdened those with long distances to travel, lower economic resources, and, perhaps, resulted in angst by leaving some household members at risk for

disease while others were protected. Simultaneously, PHNs were discarding unused vaccine at the end of the clinic in fear of criticism or dismissal for allowing queue jumping (Health Quality Council of Alberta, 2010). Vaccine was also being discarded rather than have rural PHNs travel long distances to return vaccine to central depots (Health Quality Council of Alberta, 2010). By prescribing such a strict, and thus slower, program of vaccine delivery, one could conclude that vulnerable groups not only experienced more burdens in receiving vaccine, but that they were also subjected to unnecessary risk of disease. A social justice approach to vaccine delivery would recognize vulnerable groups, not individuals, at higher risk of complications or death and thus, enable the flexibility to gear services provision in ways that create health equity. By framing vaccine delivery towards those most at risk of dying, a social justice approach could also resolve the issue of trying to determine who is more essential in a community than others. Our stance is that we are all in this world together, we all have value, and as a collective we can make difficult decisions.

## **Discussion**

There is no doubt that shifting away from a familiar and deeply entrenched way of delivering vaccines is difficult. Indeed, the release in 2016 of an Alberta ethical decision-making framework for pandemics illustrates this (Alberta Health, 2016). Concerned that a national framework was not available for adoption, and perhaps feeling pressured by the 2010 recommendation of Health Quality Council of Alberta to develop such a framework, the authors drew heavily on the province of British Columbia's ethical framework to create their document (Immunization Program Standards and Quality, 2017). While the framework mentions public health ethics as the guiding principle, the

wording references the supremacy of individuals over groups, and includes numerous bioethical terms more appropriate to interactions with individuals. Involvement of community members in the decision-making process around pandemic responses is exclusively qualified by the words ‘when possible’.

Although this movement is encouraging, we believe more can be done to ensure vulnerable populations are not forgotten in pandemic immunization responses. Perhaps the first step in moving towards social justice during a pandemic would be to shift our perceptions of health care from that of an expense of government to that of an investment in community. Practical implementation strategies include surveillance of groups who are at disproportionate risk of complications or death during a pandemic. Details such as age, gender, ethnicity, race, place of residence, place of employ, income and education level could bring these groups into focus. As we have witnessed during pH1N1 and COVID-19, vaccine development and production takes time. This time could be effectively used to fully describe and build relationships with affected groups. If a social justice approach occurs outside of emergency situations, these relationships might already be fostered and in place. A partnership approach to decision-making, employing strategies that promote consensus and social cohesion would also advance social justice. Strategies to offer vaccine where people live, work, or go to school could promote a more socially just option to exclusively immunizing in large, mass clinics. These examples are not meant to be prescriptive but illustrative of the range of possibilities available when a relational, predominately bottom-up process, informs policy making.

## **Conclusion**

Pandemics have been rare but potentially devastating events for populations (Barry, 2009; Ghendon, 1994; Giles-Vernick & Craddock, 2010). As technological advancements allow for mass production of vaccines, policies to ensure their just delivery are desired. We have demonstrated that a lack of ethical awareness and a tendency to apply distributive justice principles could be problematic for vulnerable groups seeking immunization. These problems arise from a predominantly top-down approach that neglects the relational reality of human existence. We suggest a viable alternative lies in a social justice approach to policy making, and that the work in public health and rural ethics can move this transition forward. Through dialogue, inclusiveness, and a recognition that social positioning impacts risk of complication or death during a pandemic, we might ensure that none are rendered invisible in the efforts to prevent illness and maintain health.

### **Chapter 3: Methodology**

In the previous chapters, I presented my research question as an interest in what meanings rural public health nurses (PHNs) attached to their experience of immunizing in mass clinics during the 2009 H1N1 pandemic (pH1N1), and I presented an analysis of the literature examining ethical and political undercurrents of the phenomenon. This chapter details how I applied Interpretive Phenomenology (IP) to answer my research question. Envisioning IP as a journey (Conroy, 2003) allowed me to frame, and now describe, my research method.

To provide background to this discussion, I describe the philosophical underpinnings of IP as attributed to the philosopher Martin Heidegger (Horrigan-Kelly, Millar, & Dowling, 2016; Mackey, 2005; Smythe, Ironside, Sims, Swenson, & Spence, 2008) followed by a review of expressions of rigour in IP (De Witt & Ploeg, 2006). The philosophical underpinnings of IP include tenets of Daesin (human 'being'), how humans engage and exist in the world, foregrounding (making explicit assumptions or prejudgments), and the hermeneutic circle (or spiral) as a process to reach understandings. Heidegger is the principal guide of this study as he proposed a philosophy that could be applied to the discover meaning in a complex social world. Other guides who influenced the journey included members of my research committee; scholars of topics such as research methodology, rural nursing, and public health nursing; and the rural PHNs who graciously shared their pH1N1 immunization experiences with me as principal investigator. The expressions of rigour in IP from De Witt and Ploeg's (2006) framework include balanced integration, openness, concreteness, resonance, and actualization. I will explain these tenets and how I incorporated them into the method.

Considered together, the philosophical underpinnings of IP and the expressions of rigour for IP substantiate the measures taken to produce a methodologically sound study.

With the background discussion complete, I will then move on to describe three milestones, or moments of significance, in the overall journey. The milestones include inviting experienced rural PHNs to become fellow travelers; implementing the process of walking, talking about, and recording the trips taken along the way; and thinking about the understandings of the journey to uncover meanings. Five nurses with rural pandemic immunization experience during pH1N1 took this journey, each one participating in two conversations. Throughout our travels we looked for clearings along the path that signaled we had arrived at moments of understanding about what it was like to be a rural PHN immunizer during pH1N1. I knew we reached these moments when I heard words such as “I never thought of that like this before” or “I see now what was happening then”. Conroy (2003) described these moments as shifts in paradigm, where people see and understand the world, and us in it, in a different and meaningful way. These moments of clarity brought brightness and excitement, and I was eager to talk about them when they were revealed. I felt as though we were onto something profound and meaningful in these moments and that it was difficult at times to find the words to describe them. Once all the recorded conversations were analyzed, I created an encompassing narrative on meaning that will be presented in the next chapter.

With each encounter along the journey toward understanding, the comfort and safety of my fellow travelers were of utmost concern. I include a discussion of how I attended to this throughout the study.

## **Background**

Phenomenology is described by Mackey (2005) as both a philosophy and a research method that is commonly used by nurse researchers. Mackey suggested researchers strive for congruence and continuity between philosophy and method to promote rigour, or goodness, in phenomenology. Interpretive phenomenology is one branch of phenomenology that is characterized by unique philosophical underpinnings. I present my understanding of IP, as informed by various scholars, as a preface to understanding the method choices made throughout my study and to prove my concern for study rigour. Following a description of philosophical underpinnings, I explain expressions of rigour in IP as proposed by De Witt and Ploeg (2006). Together, the discussions of method and rigour supply a subtext for understanding the method choices I made as the study unfolded.

## **Interpretive Phenomenology (The Way)**

The origins of IP lie in the philosophy of Martin Heidegger and his interest in lived experience and being (Dowling & Cooney, 2012). Horrigan-Kelly et al. (2016) summarized the writings of various scholars of Heideggerian philosophy as an interpretation of experience to explain the meanings one attached to being. Heidegger believed interpretation occurred within an embeddedness in the world (Horrigan-Kelly et al., 2016). Heidegger's ideas about truth, therefore, are congruent with a constructivist world view, as described by Guba and Lincoln (as cited in Appleton & King, 2002), and predicated on the idea that truth is a construction that occurs as people live and interact within their social worlds. Interpretive phenomenology can be considered a naturalist approach to research (Guba & Lincoln, 1982), wherein the researcher and participants are

interrelated, promoting a co-construction of knowledge that is context dependent. Since I am a PHN immunizer with experience with the pH1N1 mass immunization clinics, this constructivist perspective allowed me to embrace my experience and use it to advantage. For example, I had pre-existing relationships with many of the nurses involved in immunizing during pH1N1 clinics that eased strategies for effective recruitment of participants. I was also familiar with the demands of working PHNs and the times of the year when participation in the study would be challenging. Demonstrating that I was aware the fall months would be the busiest times for rural PHNs, and that we would work around this for data collection, eased participation. In addition, having worked in public health for several years before undertaking this study, I had some knowledge of the historical, political, and relational structures that might influence meanings. With this knowledge I could encourage exploration of the phenomenon in a deeper way than someone without this background. There is resonance, therefore, between IP and my position as an insider with thoughts and ideas that could contribute to participation by others in the study and facilitate a deep understanding of the phenomenon. There were, however, limitations to my insider status that had to be negotiated as the study unfolded. For example, there were times when I prioritized keeping harmony in our relationship over pressing for participation according to my study plan. This is described in greater detail later in the paper.

Heidegger also believed in the inseparability of the mind and the body within a physical and social context of influence and that understanding lived experience involves processing, or interpreting, experience in a holistic way (Dowling & Cooney, 2012). Rural PHNs are physical entities in their communities who provide services directly to



community members (MacLeod et al., 2008). Their services are concerned with health on a social, or community, level and, as such, politics, economics, and social determinants of health influence their practice (Mill, Leipert, & Duncan, 2002). Rural nurses are typically generalists with autonomy and an insider status that arises from their acceptance (or not) by community members; all of which influence their work (Long & Weinert, 1989, 2018). In addition, PHNs function under a unique ethical standard that is relational and concerned with social justice (Baylis, Kenny, & Sherwin, 2008; Canadian Nurses Association, 2017). Interpretive phenomenology, therefore, offers a way to study and understand human ‘being’ within the complex contextual places in which rural PHNs are situated. I am interested in a holistic understanding of what rural PHNs experienced during pH1N1 pandemic immunization clinics and how this affected their understanding of themselves and their practice. There is resonance, therefore, with the philosophical underpinnings of IP and my topic of interest.

The purpose of IP, as Smythe et al. (2008) described, is not to “prove or disprove, not to provide irrefutable evidence but rather to provoke thinking towards the mystery of what is” (p. 1391). The writings of Doane and Varcoe (2007, 2008, 2021) informed and shaped my understanding of the mystery of what *is* in the context of nursing as they suggested it is possible to research, teach, and practice nursing by applying a relational lens. A relational lens offers an expanded view of nursing and nurses not only by moving beyond what we know, or do, (although this is important) but also by considering how we are as nurses. In this holistic sphere of being and acting we may reveal to others what makes nursing a unique profession. This study went beyond a description of what rural nurses did or knew during pH1N1 immunization clinics. This study revealed who the

nurses were and how this affected the aim of protecting community members from a potentially deadly infectious disease through immunization.

Heidegger did not translate his philosophy about lived experience into a research methodology; therefore, application of his ideas into studying and understanding lived experiences has been facilitated by others such as Gadamer, Ricoeur, and Merleau-Ponty (as cited in Dowling & Cooney, 2012). Another significant contributor to IP method is Max van Manen (2014, 2017). Van Manen's guidance on reflection and writing in IP was instrumental in this study as language is the medium that people use to understand each other. I chose Conroy's (2003) guide to implementing IP as she is an experienced IP nurse researcher with methodological advice for novices. She drew directly from concepts of Heidegger's philosophy of phenomenology to frame her guide. The concepts prominent in Conroy's (2003) guide to implementing IP include: *Daesin*, ways of engaging in the world, ways of existing in the world, foregrounding, and the hermeneutic circle (or spiral).

### ***Daesin***

Refers to human 'being'—one's awareness and understanding of one's place in the world (Conroy, 2003). *Daesin* is developed through ways of engaging and existing in the world. Heidegger contended that one's awareness of one's place in the world is not always self-evident because every day experiences are lived from moment to moment without conscious reflection (van Manen, 2017). In addition, Heidegger's thoughts on truth, as described by Wrathall (2004), portray truth not as a property of things but as one's representation of things. Therefore, Heidegger encouraged a search for truth by seeking that which is hidden and then personally represented, as one's human 'being'.

The truth revealed is unique to the contextual elements of a person's life experience, such as culture or political climate. Rural PHNs who immunized in southern Alberta during pH1N1 occupied a unique context of time and spatial elements making their perceptions of the meanings attached to their human being of unique interest.

### ***Ways of Engaging in the World***

Heidegger described three ways that human beings interact with the people and objects in their environments: ready-to-hand, unready-to-hand, and present-at hand (Conroy, 2003). In the ready-to-hand mode of engagement, we operate in an unaware, routine fashion as we go about our day to day activities. When something unusual is encountered, we enter an "unready-to-hand" mode of engagement where we become more aware of ourselves and the environments. We can choose to return the ready-at-hand mode of engagement in this moment, or, we can choose to recognize that we have a problem, or, issue of significance, that needs thinking about. We then progress to a present-at-hand mode of engagement with the world where there is opportunity to think deeply about the situation, question, and perhaps understand our 'being' (Conroy, 2003).

Ways of engaging in the world were helpful to reflect upon before, during, and after the interactions with the rural PHNs in this study. For example, I thought about how I might create a setting where my participants and I could move toward a present-at-hand way of engaging in conversation about an event that occurred in the past. I reasoned, therefore, that meeting the nurses in the spaces where they immunized during pH1N1 could achieve this. Next, as I walked and talked with the PHNs, and they described their pandemic experiences, I assessed for moments when they entered unready-at-hand, or present-at hand, engagement when they were immunizing during pH1N1. For example, if

they described moments when they were surprised or unsettled about what was happening in the mass clinics, I saw these as moments of unready-at-hand engagement. It became important to pay even closer attention at these times and encourage more description. My ability to do this was challenging in the first round of conversations, however, this improved in later conversations when I prompted the participants to engage in deeper discussion with verbal or non-verbal cues. As a result, when these moments appeared, the PHNs supplied rich descriptions of how they felt, what they valued, or what they saw as significant in those moments. To illustrate, an issue that was expressed as surprising for all the nurses was seeing just how huge the crowds were that wanted to be vaccinated. I stayed with these moments by encouraging detailed descriptions of what they felt, what they did when they saw the crowds, and what their actions said about their values and beliefs. Asking the nurses to reflect on, and fully describe the surprising moments encountered during pH1N1 immunization clinics provided opportunity to reflect on them in a present-to-hand way.

Lastly, when reflecting on the transcripts of our conversations, I assessed both PHNs' and my ways of engagement. For example, there were many moments when PHNs stated 'you know' during the conversations. This signaled we were in a ready-at-hand, or routine, mode of engagement. These moments became opportunities to explore issues more fully where I requested a fuller description. The descriptions then lead to deeper engagement with the issues under discussion. For myself, I discovered moments during the conversations when I seemed reluctant to progress to a present-at-hand engagement. For example, many of the nurses commented on insufficient bathroom facilities for the crowds. At the time of the conversations, I assessed this to be quite

surprising but chose not to delve deeper. When I reflected on the transcripts, however, this appeared as a very important issue to think about as it showed the concern the nurses felt for the comfort of their community members. I learned that the surprising issues were the ones to explore more deeply as these held meaning.

### *Ways of Existing in the World*

Heidegger proposed three ways that humans exist in the world: authentically, inauthentically, or in an undifferentiated way (Conroy, 2003). In the authentic mode, persons are genuine and show consistency between their thinking and their actions. There is a moral component to an authentic existence as one strives to do what is right. The inauthentic mode is characterized by inconsistency in thinking and actions, evident in a disconnect between words and actions. Inauthenticity is also characterized by disengagement. An undifferentiated mode of existence is clear when persons do things by rote or habit, without thought. A result of existing in an undifferentiated way is a lack of agency, or going along with the group, perhaps for the sake of harmony. People may have a predominate style of existing and slip into other ways of existing at times (Conroy, 2003). Importantly, ways of existing are also influenced by how others in a situation are presenting themselves. People are interconnected and influence each other's ways of existing in social contexts.

These modes of existence were important to reflect on throughout the study for both my fellow travelers and me. I reasoned that if I had an authentic way of existence in my role as a guide and fellow traveler, and worked to facilitate a similar mode of existence in my participants, we were more likely to uncover authentic meanings attached to the experience of immunizing in a mass pandemic clinic. I worked to demonstrate my

authenticity through actions such as being transparent about goals and plans, being open and flexible to changes in plans, being accountable to my word by following through, and being explicit about the ethics that guided my behavior. Through reflection and self-awareness, I was able to identify moments when I entered an undifferentiated way of existing during the some of the conversations with participants. This was most evident in the early conversations when I focused on making sure all the equipment was still working. I was doing, instead of thinking, in those moments. Additionally, there were times when I noticed I was not paying close attention to what my participants were saying because I felt they were telling me things I already knew. This became evident when I was examining the transcripts and noticed I could have asked for more description or discussion. This became a reminder to me to strive for authentic and present-at-hand engagement in future conversations.

For my participants, I noticed moments when they too seemed distracted by their phones or noises in the building, or, there was no interest in discussion past words like ‘this is how we always do things’. I realized in those moments that it was best to pause, or offer a break, or move on to a different topic, as we were not engaged in description or interpretation in those moments. We could return to discussion after a rest or pause, or if the PHNs or I chose not to discuss further, I would honor and reflect on it later.

I did not find moments when either I, or my participants, were in an inauthentic way of existing. Perhaps this was due to the negative connotations attached to imagining we could deliberately, or unconsciously misrepresent ourselves, or, perhaps because there actually were none of these moments. Either way, if there were moments of inauthenticity, they would have had to be glaring enough for me to see them. This

reflection reveals how challenging IP can be as one must be open to see ourselves and others, even if we do not like what we see.

This discussion on being and ways of engaging and existing in the world shows how the method, and the search for meanings within the pandemic experience, intertwined. I strove to ‘be’ authentic and present, encouraged my participants to ‘be’ authentic and present while we investigated what it was like to be immunizers in pH1N1 mass clinics. This investigation included reflection on the modes of engagement and existence the PHNs noticed as they immunized. By living the philosophy during the conversations, I reasoned I would better understand what was happening as the PHNs lived their experience. Foregrounding is another tenet of IP that makes IP a unique study method.

### ***Foregrounding***

Defined as bringing to the fore the taken-for-granted prejudices, or pre-judgments, that all humans bring to interactions (Conroy, 2003), the revelation that these issues lurked in my being and would color my interpretations became important to acknowledge. I found some of my pre-judgements I when I described the literature review I conducted for my research proposal. The topics I searched, for example, were based on my judgement of what concepts mattered to rural PHN pandemic immunizers. These topics included influenza pandemics, mass immunization clinics, emergency preparedness, the incident command system, public health nursing, rural nursing. Other pre-judgements were stumbled upon at times when others involved in the study viewed issues in fundamentally diverse ways from mine. An example of this is the moments of discussion about the importance of bathroom facilities. Another example was discussion

around the incident command system; I thought that this would be an important issue for pH1N1 clinics, yet it was consistently identified as a non-issue for the nurses' clinic work. These moments of unsettledness prompted an examination of my underlying beliefs and assumptions and supplied a cue to ask myself and the PHNs what they believed or assumed about the issue. This led to a deeper description, and later understanding, of our respective views on the experience of immunizing during a pandemic..

Acknowledging my position as a colleague, or insider, is an important aspect of foregrounding specific to my study. Teusner (2016), for example, cautioned that insiders may jeopardize study rigour unless reflection on what is happening in the political, theoretical, or cultural contexts of the study is attended to. Chapter two supplied just such a reflection. In addition, self-examination (or reflexivity) on how my values or beliefs surfaced in interactions with others involved in the study was required to ensure that I constantly questioned what was going on in my mind and how this impacted the study (Teusner, 2016). McDermid, Peters, Jackson, and Daly (2014) cautioned that the closeness of an insider to the study subject matter, and to the participants, could create ethical dilemmas that could present a risk of harm to either my participants or me. For example, I sensed at moments during some conversations that the PHNs were holding back full descriptions of their experiences for fear that I was judging them or their actions. If I was judging what they were saying, I could risk harming the PHNs through disclosing things I 'judged' as problematic. I could also cause significant harm to the pre-existing relationships I valued and wished to keep after the study if I did not negotiate these moments with careful attention through reflection and reflexivity. I immediately



became uncomfortable in these moments and reflected on my body language, tone, and content of my questions to see if I was sending out an unintended message. In some cases, I realized it was too late to reflect, I already gave this impression and I didn't know how best to remedy it. I realized in these moments how important it was for me to understand how my foregrounding influenced the conversation process. It was through reflection on my taken-for-granted ideas and pre-judgements and in writings in my field notebook, research journal, and in an analysis chart for transcribed conversations that I was able to cultivate some skill in foregrounding. Interactions with research committee members were also essential to facilitate this process.

### ***The Hermeneutic Circle (or Spiral)***

This tenet is also called an interpretive circle. It is represented by Heidegger and described by Conroy (2003) as a circular, interpretive process informed by shared interpersonal interactions. Re-conceptualized as a spiral, Conroy imagined a process of interpretation wherein a group of people build upon each other's understandings over time. The process, therefore, is not a complete round trip, but a repeated circling back to revisit and consider what happened earlier in the journey, and how the involvement of others across the journey shaped the uncovering of meanings. There are six moments when traveling back and forth in the hermeneutic spiral that a novice can pay closer attention to, to better see what is happening beneath the surface of the experience. These are: (1) immersion in the descriptions given by participants with the construction of initial interpretations; (2) in-depth interpretation through written summaries; (3) including second readers and incorporating writings from other scholars; (4) identifying shifts in paradigms, or 'aha' moments; (5) identifying exemplars, or descriptions from

participants that represent an archetype of the phenomenon; and (6), principle development, or putting findings from the study forward that may further knowledge in the practice of nursing (Conroy, 2003). These dimensions are re-visited throughout the IP journey as meaning builds through interactions with participants.. As the principal investigator for this study, I was immersed in all dimensions alongside participants throughout the meaning-making journey.

Daesin, ways of engaging in the world, ways of existing in the work, foregrounding, and the hermeneutic circle (or spiral) are all elements that define IP that distinguish it from other forms of inquiry. Because IP is based on an ontological philosophy, concerned with what is and not how we know what it is, judging the rigour of such an approach requires discussion and explanation. I present my understanding of the expressions of rigour for IP proposed by De Witt and Ploeg (2006) as their description of rigour acknowledges an emphasis on ontology over epistemology. I applied these expressions of rigour in my quest to conduct a sound IP study.

### **Rigour**

De Witt and Ploeg (2006) suggested a framework for evaluationg expressions of rigour in IP. These five expressions include: balanced integration, openness, concreteness, resonance, and actualization. I chose this framework over a more generic one, such as those informed by Guba and Lincoln (Morse, 2015), because of the emphasis on ontology over epistemology in IP. Guba and Lincoln's criteria for appraising rigour in qualitative research, (credibility, transferability, dependability, and trustworthiness), rely on the prioritization of methodological issues over issues of

outcome. I detail the application of De Witt and Ploeg's framework of rigour to my method choices next.

### ***Balanced integration***

Balanced integration is revealed when readers of IP studies see a balance between the voices of method philosophers, researcher, and research participants. All three are represented and visible in the method and findings in a good IP study. Balanced integration is also visible if the choice of study method matches the nature of question of the study. My background discussion on philosophical underpinnings demonstrated the fittingness of the choice of IP to answer my research question.. The methodological choices I made at three key moments along the journey of my study are discussed in the next section of this paper. These choices included how to invite participants, where to meet, how to ensure leadership was shared in the conversations, and how I analyzed the conversations. At each moment I will detail how I maintained a balance of voices..

### ***Openness***

Refers to a perception of transparency about method decisions and what changes were made to the method along the way. I explain how I attended to this through various forms of documentation and record keeping in the next section.

### ***Concreteness***

Refers to a perception of usefulness of the study findings for nursing practice. An impression of this may have already been made from the discussion earlier in this paper about why the study was considered important. This will not be fully appreciated until reading the narrative in the next chapter.

### ***Resonance***

Refers to a perception of epiphany or reverberation, when reading the findings of the study. Since I will be writing about human experience it is expected that the narrative might strike a chord, on some level, with persons that read them.

### ***Actualization***

Refers to the perception of the possibility of further interpretation, even after the narrative of this study is reported. Readers may see other interpretations in narrative I wrote, or they may be stimulated to ask their own questions about the experiences of people in other contexts. Since the purpose of IP is not to uncover a universal truth, this study, if it is deemed good, may spur continued investigation in understanding of what it means to administer pandemic vaccines in other contexts, times, or places.

I addressed all the expressions of rigour at every stage of this study. From formatting the research question, choosing method strategies, and writing about the findings, these expressions of rigour were referred to and reflected on. These expressions move beyond an evaluation of just method issues and include matters of evaluation related to what was uncovered. This ontological focus is congruent with the overall philosophical underpinnings of IP, and as such, demands consideration of the whole of the study as it is read now and in the future.

With discussion of the background issues of philosophy and rigour complete, I now explain how they informed three milestone moments of the journey traveled: study invitations, walking, talking, and recording trips, and the thinking process for this journey.

## **Milestones on the Journey Toward Understanding**

Three milestones of significance for describing the method of this study include the moments of inviting rural PHNs with pH1N1 immunization experience to join the journey, implementing the process of walking, talking about, and recording the experiences, and lastly, thinking about the journey to uncover the meanings that rural PHN's attached to their experience. The invitations were a moment of significance because this study would not have occurred without enough interested and motivated participants. I will describe how PHNs were invited to participate, as well as characteristics of those that agreed to become travel companions. The second milestone, walking, talking about, and recording the trips taken with the PHNs, is at the heart of this study. Without careful planning and implementation of this process, it would have been impossible to move toward the uncovering of meaning. So, I will describe how this significant leg of the journey was planned in terms of finding spaces to meet and settings an itinerary. I will then describe two trips taken with each PHN, one primarily for description and one primarily for interpretation. Recording thoughts, ideas, and conversations is a vital part of this milestone as this process supplied the words for thinking about meanings. I will describe how this recording happened. The third milestone describes how I thought about the understandings that appeared along the journey and how I interpreted these into a narrative of meaning. The journey did not end after this milestone, but reaching it was necessary to produce a meaningful narrative to share this with those interested in rural pandemic mass immunization clinic work.

It is important to note that this journey was not linear. There was a back and forth movement on the journey between collecting thoughts and observations from the written

and verbal sources, and then thinking about what they meant. This circling back, and then expanding on where to go next to uncover meanings, occurred repeatedly during the journey. Details of the process of inviting participants, collecting verbal accounts of the experience of pandemic immunization, and then thinking about them, follow.

### *Inviting travel companions*

I sought companions for this journey from the southern Alberta community of rural PHNs, through purposeful selection and snowball referrals (Creswell & Poth, 2018). The choice to be purposeful, and narrow potential companions to those with rural, pH1N1, mass immunization clinic experience, was deliberate and in the interest of seeking depth in understanding. Paper posters served as invitations to participate and were mailed to all ten public health buildings in southern Alberta. In addition, an electronic version of the invitation was displayed on the private section of my Facebook social media account, through which, only my friends with permission to see this section, could access. As nine years has passed since the clinics were held, I hoped the electronic invitation would reach retired PHNs. Wall, Edwards, and Porter (2007) utilized oral histories of retired nurses to study the education experience of nurses across time. They contend that the experiences of eyewitnesses of events of the past can supply insight into long-term meaning. I reasoned that retired nurses might have historical knowledge of the history of mass immunization clinic function that would deepen the meanings attached to the pH1N1 experience. Finally, an invitation in the form of a memo, was negotiated with Alberta Health Services managers, and sent by the program secretary of the public health nursing program, to all southern Alberta PHNs.

The primary considerations in issuing invitations to participate in my study were to ensure a multitude of strategies that could equitably reach all potential participants, and, ensure there was no coercion of any potential participant. With all the strategies of invitation employed, none involved me, or a manager, approaching PHNs directly. Other concerns about invitations included those identified by Coyne, Grafton, and Reid (2016) when they cautioned that inviting nurses to participate in qualitative research required attention to potential barriers such as participant or stakeholder unfamiliarity with the language of research, a lack of organizational support, or a reluctance to take time away from clinical care to attend to research endeavors. I addressed these concerns by framing myself as a guide, as well as a traveler, on the journey to understanding. This allowed me to be prepared for questions about the research process, of which, some arose. I realized also that managers in the public health nursing program were potential stakeholders in this study, so I included them in the process by describing the study during negotiation the memo of invitation. Finally, I was prepared to explain that this journey would not request nurse participation in September or October, as these months are typically the busiest months in a public health nurse's year. All these concerns were anticipated before the invitations went sent to facilitate a safe and comfortable journey.

All the strategies proved fruitful, as five PHNs, including a retired PHN, responded to, and later agreed to participate in the study. Creswell (2014) recommended three to ten participants are needed for a phenomenological study, so this signaled enough interest to proceed. Of note, two other PHNs approached me to discuss participation, however, they had no rural pandemic immunization experience. They had to be excluded

after fully explaining the nature of my study. All five travelers stayed for the duration of the journey.

Of further note, two of the five PHNs had both rural and urban pH1N1 immunization experience. This was not seen as problematic at the time of invitation, however, during conversations I heard these nurses including descriptions of urban experiences. I did not see some of the descriptions as urban-focused until I reviewed transcripts of the first conversations. This made thinking about the content of the conversations more complicated. I reasoned these descriptions could be useful to compare the urban experience to the rural one and reflected on them as such.

One such reflection revealed that rural PHNs often knew every community member that attended their clinics and they had a sense of who might be troublesome due to past interactions. A troublesome community member could be one that is vocal in the community about immunizations being dangerous and attends mass clinics to discourage others from receiving the vaccine. Another troublesome community member could be one that does not want to wait in line for vaccination, instead, asks to speak to a nurse about moving to the front of the line. By virtue of having a past relationship with community members, the rural nurse can anticipate how community members might behave in mass immunization clinics, and, how to approach them before trouble escalates.. In an urban clinic, attendees are largely strangers meaning the nurse often must wait until troublesome behaviors are shown before acting. I would not have noticed this difference unless I compared the type of aggressive behaviors reported at an urban clinic and the instances of aggressiveness at the rural level. One of the PHNs with urban experience reported community members spitting at staff or getting into fist fights outside



the clinic. This physical aggression was not reported at any of the rural clinics, however, there was verbal aggression reported in the rural clinics. This comparison stimulated reflection on how familiarity between the rural PHN and community members might influence safety issues: for community members and the PHN.

On further reflection, however, I realized I may have missed references to the urban experience that could have muddied the interpretation process. This is a significant limitation of this study that could have been remedied by more careful screening of potential participants, or, by giving more specific instructions when the conversations started. This was an issue of intense reflection as a rural PHN that has immunized in urban contexts brought this experience into her being. However, the urban perspective could have tipped the balance of integration of voices such that the rural experience was not heard or was misrepresented. This significantly impacts other expressions of rigour such as concreteness, resonance, and actualization of the findings. Since this issue was unanticipated, and not discovered until first conversations occurred, I decided to carry on by making explicit that the rural experience was my primary concern in the second round of conversations. In analysis, I bracketed the instances when I found references to urban issues as spending time comparing the issues would have required more conversations with the participants to fully explore. I had limited time and resources to pursue this path, but, thought it could be an issue for another research project.

### ***Walking, Talking, and Recording the Journey***

Describing the journey toward uncovering what meanings rural PHNs attached to their pH1N1 mass immunization clinic experience begins with detailing how places to meet were decided, and, the general itinerary of the journey with PHNs. I move on to

describe how we walked and talked about our experiences. The discussion includes details of our first trip and our focus on description. After describing a period of thinking and further preparation for a second trip, I will detail elements of our second trip that focused on interpretation. The processes for recording aspects of journey are interwoven throughout.

**Where We Met.** Meeting spaces were secured, whenever possible, where the rural PHNs immunized in 2009. This required negotiations with community members that rented spaces in towns across the geography of southern Alberta. As a PHN that worked in this area for many years, I had traveled, and at times worked, in some of these towns. As such, I did not give much thought to other options. I found relating that I was a PHN with familiarity with their towns, and the nurses that worked there, eased the securing of these special meeting places. I reasoned that placing us in the spaces where the PHNs worked during their pandemic experience could help movement into a present-at-hand recall of the event. In addition, rural nurses tend to set up mass immunization clinics outside their office buildings, such as community senior's centers, schools, or recreation centres. Coyne et al. (2016) contend that interviewing nurse colleagues in their employer's buildings could create barriers for disclosure and create an implicit power differential between participant and researcher. Therefore, securing public settings mitigated this undesired situation. Ultimately, three of the five nurses agreed to meet in a private and quiet room in the community buildings where they immunized in 2009. One building no longer existed, so we met in a private room at a local library, and one participant indicated she preferred to meet at her residence. I did not question why this was her preference, and since I was traveling to meet participants in various

communities, I accommodated her request. I assumed asking her to meet me in the community where she immunized in 2009 would have required an unacceptable burden travel for her. On reflection, this was a moment where I could have delved deeper to understand what was behind her choice, and my preference to meet in community spaces, to fully understand and implement my method. Interestingly, the participant that I met with in her home discussed urban issues more so than the other participants. Perhaps by not exploring deeper her preferences for meeting space, I missed an opportunity to reinforce my interest in the rural experience. I discussed in the invitation section how this could impact expressions of rigour. Be that as it may, the first, and later in-person meetings with rural PHNs that participated in this journey, occurred in the spaces described above.

**The Itinerary.** The general itinerary of the journey included a first meeting to discuss the study, obtain written consent (see Appendix D: Consent Form), to set the tone for the study, and then proceed with a recorded trip focused on description. Conversations of 45 minutes to 60 minutes happened, however, if we both agreed extend, we did. See Appendix A: Participant Demographics, for a table that describes the travelers with rural, pH1N1, mass immunization clinic experience. This table describes aspects of the being such as age, gender, education, years of experience in public health in 2009, and whether they lived in the communities where they immunized or not. One participant declined to supply information on her age or length of service in public health in 2009. I chose not to address this as the instructions for the form gave that choice, however, like the issue of meeting spaces, I realize I could have inquired further about her choice to better understand my method choices and implications for rigour.

I started the first conversations after gathering consents and demographic information. I recorded all the conversations with two recorders, encrypting and saving the recordings on two digital storage devices: a password protected laptop computer and an external hard drive. Once this was accomplished, I erased the recording on my back-up recorder. I transcribed all the conversations for this study to immerse myself in the PHNs' experiences. I worked often with printed copies of the transcripts and stored them in a locked cabinet when not in use. I only used pseudonyms in the transcripts, and I exchanged any identifiers of names and places with generic terms. I took time to reflect on, and analyze, the content of first conversation, before taking a second trip that focused on interpretation. I planned for telephone contacts after the second trip if I had any questions that arose while thinking about meanings attached to the pH1N1 immunization experiences, but none were done. I felt confident after the multiple conversations with PHNs that I had a good understanding of their experiences. This impression came from the observation of similar issues of discussion across the 10 conversations, and the indications, when asked directly, from each participant that they had no other issues they wanted to bring up. I shared transcripts of the first conversation with each PHN and requested a response about accuracy, omissions, or errors. I also requested feedback on any other thoughts that appeared while reading their transcripts. Only one PHN provided this feedback, so it was decided not to request this after the second conversation. I worked, therefore, to create a balance between asking too much of my participants and not asking enough.

I wrote regularly in a research journal to document the overall journey and the modifications to the itinerary that were made along the way. The journal also included

notes on the meetings with research committee members that occurred at regular intervals. This journal was, and continues to be, available for audit as recommended by Koch (2006). I took field notes before and after each trip taken with the PHNs to record plans for the conversation, my feelings about the conversations and ideas that I want to follow up with later. Field notes were consulted when writing journal entries.

**Beginning the Trips Toward Understanding.** Once the processes of confirming consent and collecting demographics was complete I worked to set the tone for the upcoming journey.

Setting the tone for the journey, involved strategies to signal a return to the time and place of pH1N1 immunizations, and, to signal that the PHNs would be guides as well as travel companions. So, I asked each nurse to lead me on a walking tour of their immunization spaces, explaining how the clinic was set up in 2009, and any thoughts on returning to the space triggered for them. In instances where we were not in the actual immunization space, I requested a verbal description of the space. I took field notes during the walking tour to capture the initial thoughts and ideas that arose. To further set the tone for journey, I shared copies of pandemic newspaper articles from 2009 (see Appendix C: Pandemic Newspaper Articles). This strategy is encouraged in qualitative research by Glesne (2016) to understand the history of a phenomenon and to promote reconstruction of that time in history. With the passage of nine years between the pH1N1 immunization experience and the timing of this study, I reasoned that setting the tone for the journey would involve more than one strategy to promote memories of the event. I asked for any thoughts about the news articles, and it was at this point that I started recording the conversations. On reflection, I realized these articles might have

inadvertently signaled that the issues in the media were what I wanted to discuss. I could have better used the strategy by sharing a greater variety of media from the time such as newscast recordings, or, I could have asked my participants to write their own account of what they remembered about the event before we met. Increasing the variety of strategies could have better refreshed and enriched the recollection of memories from that time.

Starting the recorders signaled we were officially embarking on the journey toward understanding. I have showed that thinking, and revisiting steps taken, were central components of this interpretive phenomenology. I move now to describing in more detail the first trips taken with the PHN that focused on description.

**The Trips to Describe.** Several scholars were consulted in preparation for this leg of the journey, including Conroy (2003), Mackey (2005), Brinkmann (2018), and Weiss (1994). Wiess (1994), for example, provided practical guidance on how a novice might implement a conversation such as: packing all materials and equipment in a systematic and purposeful manner; tips for how long a conversation might last, or; what do it the conversation seems to be going astray. Mackey (2005) described descriptive conversations in IP as events in which we make explicit what is known in advance of interpretation. By starting with broad descriptions, the stage was set for the PHNs to share what might be hidden in terms of understandings and meanings. Our descriptive conversations, therefore, addressed contextual elements such as what we knew about immunizing in mass clinics, what we noticed was different about mass clinics for seasonal influenza outbreaks versus the pH1N1 outbreak, the political climate, and rural culture. We also discussed opinions and feelings about the pH1N1 experience. Interestingly, the issue of not remembering details of the event was often raised

suggesting my companions were concerned they could not supply what I was looking for. These moments became opportunities to guide the nurses about the purpose of IP, which was to uncover the meanings that the nurses attached to the experience. The issues that they remembered years after the event became what was important to talk about as these were meaningful across time.

This trip had a loose itinerary with a set of semi-structured questions (see Appendix B: Conversation Questions) as described by Brinkmann (2018), that I prepared based on the findings of my literature review and discussions with my research supervisor. I had, therefore, some questions to stimulate discussion, but was mainly interested in following the nurses in the directions they chose to take. I employed elements of Conroy's (2003) hermeneutic principles for IP research, such as the importance of immersing myself in the world of the PHNs and presenting a constantly questioning attitude, to promote rich descriptions.

For this leg of the journey, my main goal was to understand, as fully as I could, what the PHNs were telling me. So, I encouraged descriptions about the PHNs thought, did, or felt at different moments of their immunization experience. I sought clarifications when general words such as 'they' were vague to me, or I summarized what I was hearing to check in that I was understanding correctly. Summarizing was difficult due to the level of concentration that it required, however, I appreciated times when a PHN would say something like 'no, you've got it wrong'. I came to understand these moments as triggers to stop and assess what was really happening. Perhaps I needed a break, or perhaps these moments signaled I was not being present as I could have been. In not being as present I missed how my assumptions and or pre-judgments of the issue were

filtering what was said. An example of this was revealed in the first conversation of the study. I stated, “so that alludes to the priority immunization system...” and the PHN replied, “no, I mean they are [all] going to get it.” On reflection of this exchange, I realized that I was thinking too much at the time, instead of listening to the PHN with the aim of understanding. I realized that I was rushing the process by thinking before I really understood what was happening. The more proper times to really focus on thinking, therefore, were the times before and after the conversations. Perhaps a more experienced researcher could have better negotiated the combination of understanding and thinking as they interacted with participants. I did see that this improved for me by the second round of conversations.

**The Time Between Trips.** The time between the first and second round of conversations was dominated by immersion into the recordings of our trips. I listened to the recordings repeatedly, sometimes as a whole, and sometimes focusing on specific sections. I then carefully transcribed the conversations. I jotted down thoughts and ideas while transcribing the first conversations, however, for the second round I focused on just transcribing. I knew I would be spending time thinking about the content of the second transcripts, so I decided to focus on accurate and efficient transcription. It was suggested by my committee to forward the second recordings to a professional transcription service. However, since this strategy was not proposed in submission to the ethics board, I had completed one transcript already, the process to forward encrypted recordings to the transcriber was arduous, and the cost of transcription was high, I decided to continue transcribing myself. I entered the transcriptions into an analysis table (see Appendix E) that was the same for all ten conversations (Conroy, 2003). The analysis table became a



travel log that recorded the journey in a detailed and permanent way. I shared the transcripts, in this analysis table format, with each nurse and requested their review for accuracy and for any ideas they might trigger. As mentioned, this was discontinued after the first round of conversations as only one participant responded. On reflection, sharing only the transcripts could have been a more acceptable alternative to request PHNs' confirmation that I was portraying their words accurately and, to keep the PHNs engaged in the study. The analysis table was likely too jargon-filled, and composed of too much empty space, possibly creating confusion and undue pressure for the PHNs. As a result, I lost opportunity to confirm transcription accuracy.

It was during the process of immersion in the analysis charts that I could see moments where I moved past some issues too quickly. As mentioned earlier, the issue of insufficient washrooms is one example of one that was passed over. Be that as it may, issues began to appear that were common among all the travel companions, such as overwhelming crowding and surprisingly aggressive behavior from some community members. There were many issues expressed that surprised me, such as a concern that food and water were not provided by managers for the nurses that worked the clinics, and that a manager asked one PHN to take all the pH1N1 vaccine out of a neighboring health unit office without telling the office nurse what she was doing. I was also surprised that some of the issues from my literature review were not a part of the experience of these nurses, such as the incident command system. I went into the next round of conversations with another list of semi-structured questions (see Appendix B: Conversation Questions) to further explore the surprising and common issues uncovered. I also consciously planned to stay with topics longer, to be more present during the conversations. The aim

of the next trip was to move past description and delve deeper into interpretation of understandings. We had our initial descriptions and some preliminary interpretations. These emerged through my immersion in the recordings and transcripts, by writing and summarizing, and by sharing these summaries with participants and research committee members. The second trip was needed to explore the preliminary interpretations, assess their plausibility, and uncover more interpretations by specifically looking for them.

**The Trips to Interpret.** The second trip with the PHNs was prefaced by expressing the intention to focus on rural experiences only and to move past description and into interpretation. Although a comparison of the two experiences might have elicited a richer interpretations, I chose to encourage discussion of the rural experience only. As a guide for the journey, with responsibility to be accountable for method and rigor, I reasoned that this request was reasonable as taking a side journey that only two of the participants shared (immunizing in urban clinics) could reveal issues that did not pertain to the rural situation, and, I might miss them as such. Balanced integration, concreteness and actualization of findings would be compromised.

So, after a reminder that we could take a break at any time, or stop the trip completely, I prepared the PHNs for more probing questions about values, beliefs, and assumptions, that might move us into moments of discovery. For example, when moments of interpretation seemed imminent, I asked for further discussion on what the PHNs' actions or thoughts said about their beliefs or values about themselves as rural immunizers in a pandemic. These moments were revealed when I heard words such as 'I never thought of that in this way before', or 'maybe this is what was going on'. These moments were understood as moments of a shifting in paradigm (Conroy, 2003) where

the PHNs uncovered understandings of their experience that changed after their reflections. By being more present along this leg of the journey, I was able to understand that this was happening, and I had great excitement when we talked about them. It was during these moments that I felt I was beginning to truly understand IP. I was excited to transcribe and immerse myself again in the travel logs to further my quest for understanding through continued thinking about the overall meanings attached to pH1N1 immunization by rural nurses.

To move forward in the journey, I thought about the moments of paradigm shift related by the participants, as well as those moments of paradigm shift that I had by immersion in the whole of the study. These moments are brought into the narrative presented in the next chapter. This narrative captured what it was like to be a rural PHN who immunized in mass, pH1N1 clinics, in 2009. Rettie and Emiliussen (2018) helped clarify this concept when they described analysis in IP as a double hermeneutic, meaning the researcher tries to make sense out of the participants' tries to make sense of something. Details of how I approached this thinking process follow.

### **Thinking**

As noted before, thinking occurred throughout this journey and was envisioned as a circling back to assess the steps taken and then propel further steps toward the clearings that would reveal moments of understanding. The moments of understanding could then be summarized into a narrative that described meanings. The primary tool for this process was the analysis table suggested by Conroy (2003), changed slightly on advice from my supervisor to include the column 'key concepts in interpretation' (see Appendix E:

Analysis Table). This table brought the content of the ten travel logs into a manageable format for immersion.

I started the thinking process by dividing the contents of the transcript into chunks of dialogue that related to one issue. I then underlined words that captured the description of that issue. I then translated the key words into my understanding of what was said, described by Conroy (2003) as *précis*, and noted them in the second column. In the hermeneutic spiral, the moment involves immersion in the descriptions of the participants and the construction of preliminary interpretations. This was a difficult part of the journey and required much thought. For example, there were instances in the beginning of the thinking process when I just parroted what was written rather than summarizing in a *précis* statement.. It was not until I discussed this process with my supervisor, and practiced with several transcripts, that I was able to capture what was going on beneath the description. To illustrate, a participant described how some of the rules for vaccine distribution seemed to be designed for big city clinics, not smaller, rural settings. I was able to interpret this as *urbancentrism*. I recorded this concept in the third column. I then went to the scholarly literature to assess what was known about *urbancentrism* and assess if this concept best captured what the PHNs were describing. The last column recorded reflective notes such as questions to pursue further with participants or committee members, hunches about what was happening, and how I my personal thoughts and ideas might be influencing the interpretations. This process was repeated for each chunk of dialogue; however, I did not always go back to the literature if I had confidence I had understood, and correctly interpreted, the concept.

To manage the large volume of concepts that appeared, I looked for patterns within and among the various transcripts to assess for repeated, unique, or particularly important concepts that would further the interpretation process. For example, crowd management became a concept of interpretation for all the PHNs. There was some variance in how the PHNs approached crowd management, however, this was a significant issue for all of them. I reasoned that concepts that were repeated often would be important to consider in interpreting overall meanings. In addition, if there were long pauses, or indicators of tension such as tears or laughter noted in transcripts, my attention was drawn to these moments as significant to overall meanings. I reasoned that the issues that were discussed at these times still had an emotional impact years after the event and thus were worthy of close attention. Lastly, the moments where participants described shifts in their understanding of the phenomenon of pandemic immunization as then, as compared to now, became the primary ones to further analyze and interpret. An example of this was the revelation that parents might be feeling guilt about bringing only the one child that qualified for vaccine on that day, for immunization. The PHN initially described this as a choice that meant the family would be waiting too long to get their vaccines. Perhaps this was related to inconvenience or increased costs for the family to make multiple trips to town for vaccine. When we reflected more, however, the PHN brought up the deeper concept of guilt. The PHN used the word 'guilt', but the depth of understanding of human 'being' attached to this moment could include other words such as heartbreak, psychic pain, unforgiveness, or torment. Therefore, this was re-interpreted

by me as a ‘Sophie’s Choice’<sup>1</sup> moment where one had to choose among their children who had a chance to survive, and who did not. The parent made the choice to wait until all could be immunized, thus risking illness for everyone, as preferable to only protecting some members and living with the guilt if an unprotected member died. Since my research question was to uncover the meanings that rural PHNs attached to their pH1N1 immunization experience, I reflected on this ‘aha’ moment and an interpretation about what this revealed of the ‘being’ of the PHN. The rural PHN saw this anguish as an underlying possibility to describe the choices her community members made. This was a moment to reflect on how the rules of vaccine delivery affected rural families.

It was during the thinking process that ‘aha’ moments occurred for me as well. These moments struck me as times of understanding when I thought ‘this is what is going on here’. For example, there was much discussion about how the criteria for who ought to get vaccine first, affected the work of immunizing. Although the PHNs did not say this was an ethical issue, I interpreted these words as such. This prompted the deeper delve into the literature on ethical issues related to vaccine delivery that I described in chapter two. Interestingly, these moments sometimes struck at odd times, most often in the early morning when just waking up. I made sure to keep a notebook by my bed to record these fleeting thoughts. Discussing the mysteries of the thinking process is beyond the purpose of this chapter, although there are scholars that investigate this (Boden, 2003; de Souza et al., 2014). Pondering how thinking happens, though, brings us back to issues of philosophy, where we started this journey of understanding of what it is like to be human.

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<sup>1</sup> Sophie’s Choice is a major motion picture depicting a cruelty of World War II where a Polish mother was given a choice to save one of her children, or neither of them, before she was sent to a concentration camp.

The hermeneutic spiral, therefore, has potential to continue even after an end point is declared for this journey.

### **Ethical Considerations**

I received Research Ethics Board approval, from the University of Alberta, study ID number Pro00085270, to implement this study. The standards for ethical study as described by Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada (2014), and the standards for ethical nursing practice (Canadian Nurses Association, 2008) informed the planning and implementation of this study. The primary ethical considerations from the Canadian Tri-Council statement included provisions for initial and ongoing consent, fairness and equity in research participation, privacy and confidentiality, and measures to prevent physical and mental harm to participants. As a registered nurse, the ethical values and responsibilities that guided my conduct included: the provision of safe, compassionate, competent, and ethical care; promotion of health and well-being; promoting and respecting informed decision making; honoring dignity; maintaining privacy and confidentiality; promoting justice and; being accountable (Canadian Nurses Association, 2008).

Meeting the conditions of informed and ongoing consent, ensuring confidentiality, and promoting fairness and equity in research participant were showed in this discussion. For example, I described of how I obtained initial consent and reminded participants that we could stop the process for a rest, or completely, at any time along the way. Pseudonyms, encryption of digital recordings, and the locked cabinet to house printed materials, ensured confidentiality. The wide range of invitation strategies, and the

explanation as to why I had to decline participation for some respondents, promoted fairness and equity in participation. Measures to protect participants from harm or discomfort included being transparent about the study aims and the process envisioned to achieve those aims. Contact information for resources for support if the journey proved stressful were provided in the consent and information document delivered to participants. The physical comfort of participants was attended to by negotiating meeting spaces that were of mutual acceptance, supplying snacks and water, and even making sure I did not wear any scents. Maintaining communications with the participants across the long journey of promoted accountability. Observation that all participants stayed with study over a period of several months suggests that participation did not cause harm or discomfort.

There were two unexpected ethical issues that arose during the study: keeping confidentiality and my holding back on questioning participants about places to meet and declining to supply full demographic descriptions. Maintaining confidentiality of the participants, for example, could have been compromised by holding conversations in the rural spaces where they immunized. I found I needed to explain to community members why I wanted to use their spaces with enough detail to gain their trust to rent me these spaces, yet try not to reveal the identities of the nurses I would be talking with. I negotiated this by focusing on who I was and what I planned to use the space for. I knew, however, that it would have been easy for community members to see who I was talking to that day. This might have been a reason one nurse chose to meet at her home. Confidentiality became an issue as well when one nurse guessed the identity of another participant. Since I employed a snowball strategy for referrals of potential participants,



there was potential for this. The use of pseudonyms will supply a level of confidentiality for this nurse, however protecting full confidentiality could have been compromised. This risk was clearly said in the consent form for participation, however, serves as a reminder to future researchers that work with rural participants.

The second ethical challenge was my accommodations of changes to method about places to meet and in collecting full demographic information. I described these moments as ones where I chose not to confront, or press, the participants about their preferences. I am reminded of the cautions from McDermid, Peters, Jackson, and Daly (2014) that insider research with colleagues can create tensions that could negatively impact relationships in the future. By not pressing the PHNs to go along with these method choices, I was signaling that our relationship was important to preserve. However, I could have approached these moments with a bit more curiosity and sensitivity to seek greater understanding of my method choices. These accommodations may have negatively affected the rigour of this study. On reflection, these moments were signals for me to assess my foregrounding assumptions, to seek further information for understanding, and then possibly learn more about the research process.

### **Summary**

This discussion of method illustrates how IP was conceptualized and implemented in my journey to explore the meanings that rural PHNs attached to their 2009 pH1N1 mass clinic immunization experience. As a method where I could integrate my experience as an fellow PHN and pH1N1 immunizer, as well as legitimately study a phenomenon that occurred in the past, IP allowed for a way to uncover who rural PHNs were, and are as, a result of their experiences.

This journey would not have been possible without the participation of guides and travel companions. Interpretive phenomenology philosophers, experienced nurse researchers, scholars of nursing practice, and the rural nurses who experienced pH1N1 immunization clinics in 2009 were significant participants in this journey. The underlying philosophical concepts of IP include Daesin, or human 'being', ways of engaging in the world, ways of existing in the world, foregrounding, and the hermeneutic spiral (Conroy, 2003). Through this discussion, augmented by several examples from the study, I have shown how these concepts were integrated into the trips for description and interpretation, as well as the time between trips. Thinking was showed as double hermeneutic process in which I made sense of what the PHNs made sense of about their pH1N1 experiences. Thinking also included moments where I made sense of what was happening as I revisited transcripts and field, journal, and analysis table notes.

On the expressions of rigor suggested by De Witte and Ploeg (2006), balanced integration, openness and resonance are evident in this discussion through the incorporation of philosophical concepts IP into three milestone moments along the journey: invitations; walking, talking, and recording, and thinking. Concreteness will be showed in the next chapter discussing findings. Actualization may be showed if future readers continue the interpretation process

The challenges of conducting an IP consistent with philosophical concepts, working towards rigour, and managing ethical issues were presented and described with examples. The journey toward understanding was, therefore, a long and complex one. There was no sign, however, that any traveler was harmed on the journey, even though there was risks for breaches of confidentiality. The rigour of the study may have been

compromised by my moments of undifferentiated existence, or a failure to progress to a present-at-hand mode of engagement. The next chapter will reveal the findings of this imperfect endeavor, where reflection on method and rigour intertwine to offer insight on what it meant to be a rural PHN immunizing during pH1N1.

## Chapter 4: Findings

The previous chapters presented an introduction, literature review, and discussion of interpretive phenomenology as the method chosen to explore the research question of what meanings rural public health nurses (PHNs) attached to their experience of immunizing in mass clinics during the 2009 H1N1 pandemic (pH1N1). While undertaking this study, I identified how nurses uncovered meanings in their pandemic immunization work as they negotiated the tensions of closeness to, or farness from, community members, clinic planners, and fellow workers in the clinic space. Consequently, participants experienced unpreparedness, urbancentrism, distrust, moral distress, and personal growth. An overall interpretation of these meanings is that working in rural H1N1 mass clinics was like being stuck between a rock and a hard place. This stuck-ness was revealed when moments of ethical dilemmas appeared, often related to expectations to attend to the needs of individuals over the needs of groups such as families or communities. Stuck-ness was also revealed when the rules attached to the implementation of the mass clinics conflicted with usual rural practices and values. This stuck-ness sometimes limited the ability of rural PHNs to provide efficient and ethical care at a time of urgent need. The stuck-ness sometimes created moments for personal growth in communications skills, leadership, increased compassion, the importance of self-care, and ability to cope with crises with calm and resilience.

The research findings are presented in three distinct and interconnected narratives that describe three timeframes:

1. The days just before clinics opened.
2. The first days of immunizing.

### 3. Immunizing in the days after re-organization.

Narratives offer writers and readers the opportunity to reflect on both the rational and pre-reflective aspects of life experience (van Manen, 2014). The overall aim of using narratives is to invoke a connection to, or, understanding of participants' experiences. Conroy (2003) encouraged novice researchers using IP to look for moments of revelation, or paradigm shifts, in themselves and in the words of the participants of the study, and then capture and communicate these as exemplars. The exemplars, or the three narratives in this paper, make the revelations visible, or, accessible.

There is no blueprint on how to construct a narrative, but van Manen suggested strategies that promote a poetization, or, a primal telling of the phenomenon (van Manen, 2014). For this reason, the narratives have a degree of poetic license as I crafted them from the stories of five rural PHNs who lived the experience of immunizing in rural clinics during pH1N1. The pseudonyms that the rural PHNs chose for this study, as they will appear in the narratives below, are Bonnie, Elizabeth, Windy Lady, Spike and Sarah. Their words are italicized to indicate a direct quote from our series of recorded conversations with a notation of who is speaking either before or after each quote. The feminine gender is used to reference nurses in this paper because all the participants were female. This is not meant to imply that all nurses are female. The narratives are written in the present tense, to situate readers more fully in the experience. I have indicated changes in tense, while quoting the participants, with brackets. There is an intermingling of my words as a researcher and those of the PHNs that shared their stories, so any words not italicized in sentences or paragraphs, are mine. When the word 'we' appears in the narratives, I am indicating the inclusion of my reflections before, during, and after the

conversation sessions with the five rural PHNs. My immersion into the phenomenon of immunizing during a pandemic included many hours of reading, writing, and reflecting on the ideas of scholars, research committee members, and my position as a PHN with pandemic immunization experience and researcher. Field notes, research journal entries, conversation transcripts, and scholarly literature related to the topics of conversations, were all consulted while writing the narratives. I am assuming that the moments attached to the word ‘we’ are plausible and will be accepted as part of poetic license. I included my reflections and ideas into the narratives to illuminate the complexity of the phenomenon of immunizing in rural mass clinics, and to illustrate how others are included in the hermeneutic spiral of interpretive phenomenology. When the writings of scholars contributed to the understanding of the statements in the narratives, they are cited within the narrative. There are moments in the narratives where I offer the reader questions. These questions are opportunities for reflection, or, moments for readers to imagine themselves in the shoes of the PHNs.

The three narratives offer a glimpse into the experience of immunizing in a rural mass immunization clinic during a pandemic. I offer the interpretation of stuck-ness between a rock and a hard place as what the construction of these narratives revealed. This interpretation will be discussed in greater detail after the narratives. Included in this discussion, the issues of individualism and relationality are identified as tenets that promote a greater understanding of what the experience of immunizing in rural communities meant to the PHNs that lived it. These tenets may inform the implementation of future pandemic immunization campaigns. Readers of the following

narratives may see other interpretations, and I invite sharing these to continue dialogue on the phenomenon of immunizing in rural pandemic mass clinics.

### **The Narratives**

The days just before the clinics opened are significant times to visit as they reveal what it is like to prepare for the mammoth task of immunizing in a mass pandemic clinic. The first days of immunizing are significant as they reveal what it's like to immunize when anyone over the age of six months of age is eligible to present for a vaccination. After five days of immunizing under this policy of eligibility, clinics were shut down and re-organized (Health Quality Council of Alberta, 2010). Immunizing in the days after re-organization is significant as this reveals what it's like for rural PHNs to immunize with a stricter set of eligibility criteria. Eligibility for vaccine is narrowed to specific age groups or medical conditions on specific clinic days. Once an individual is eligible for vaccine, they remain eligible as more categories are added.

### ***The Days Just Before Clinics Opened***

We first hear about the arrival of vaccine in the province on the evening news. Before this, we heard that a vaccine might not be available before the new year. Yet, suddenly, in October, it's here. My first thought on hearing the news is *my whole nursing life is going to change forever*, and then, *I [have] shortness of breath (Sarah)*. We've never immunized during a pandemic before. No one has attempted an immunization campaign of this scale before (Low & McGeer, 2010). This is big, and it's happening fast. Adding to the distress, this is happening in the fall. The fall's the busiest time of our year with school immunizations, routine childhood immunization clinics, home visits to

families with newborns, and seasonal influenza mass clinics. How were we going to manage everything?

Elizabeth is a busy mom with young children and she works part-time as a PHN in her rural community. When she receives a call at home from her manager letting her know her clinic scheduled in two days for seasonal influenza immunization, will now be for pandemic influenza immunization, she responds: *oh...okay (Elizabeth)*. One can almost hear the wheels in her head turning in that pause between those two short words. The manager hears the pause, senses the uncertainty and says “Don’t worry, we will send you more staff and supplies. We will also make sure to let the media know when, and where your clinics is, so your community members know what’s happening. Provincial staff are setting up a website for community members to look up more clinic dates and times. This should cut down on the number of phones calls you might get.” Suddenly we’re getting help from others for work that we’re usually responsible for: Oh. Okay. Do the people helping us know that when communication happens in a rural community, *we have a drum, we have our own beat, that works, it works good for us (Windy Lady)*. We post notices up in the local churches, town office, or pharmacy. *[We’ve] got a lot of older people that are not up to date with all the technology, and not sitting on their phones all the time (Windy Lady)*, they’re not looking for information on websites, they have local sources they prefer to get information from. Do they know that if all my supplies are not sent, we can’t simply pop over to the central depot and pick something up? Sarah says, *it’s very foreign, it [feels] weird. [I’m] feeling nervous, are my supplies going to arrive?* Will the staff they send be able to immunize infants, children, and adults? As Sarah points out when students and nurses from other departments are deployed to work in the



mass clinics, ultimately, *I am responsible for them...because overall, [this] is my clinic, it's my community, [I] take a feeling of ownership and responsibility [for the care provided] to those in the community.*

Already we sense that the pandemic immunization clinics are different from what we're accustomed to. It's a good thing we've immunized in mass clinics before as we can predict some of the issues that might arise, however, we'll have to trust that the planners, that are situated so far away from us, will be able to help, and not hinder, our efforts to administer vaccine. We're used to having a lot of autonomy and we know what works best for us.

Other immunizers are coming to our community to help, and we wonder about their experience with mass clinic immunization. As Bonnie says, *we [PHNS] think about vaccines differently, your whole knowledge, the way you give injections, how you do it, is different* from someone that is less experienced. Elizabeth explains that as an experienced immunizer *you maybe don't even realize you are doing all [the] steps. You get to the point where you are just doing things and then something happens, and you follow that.* We want to help less experienced immunizers to get to a place of comfort and independence, but we know that'll take time, support, and practice. What will the experience be like for less experienced immunizers?

Trusting that the where, when, and who of the mass clinics is being sorted out, we turn to the issues of what, and how, of vaccine administration. We search the recently created staff website to read about the vaccine: how to store and transport it, what components could be allergenic, what the recommended doses are for different age groups, the number of doses people need to be protected along with the timing for

administering multiple doses, and, how to record its administration. The vaccine for pH1N1 is different from seasonal influenza vaccines: it has a substance in it that stimulates a faster immune response (called an adjuvant), components need to be mixed just before administration, the vaccine is viable for 24 hours after mixing, and it is an opaque, white color. Interestingly, the trade-off for faster immune responses is a potential for more soreness at the injection site. How will community members feel about seeing an opaque liquid, and then getting a sorer arm? Will they come back for their second doses? There is a smaller dose for children. We know this is meant to stretch the vaccine over more people, but this dosing adds an additional level of complexity to negotiate. This is challenging for even an experienced PHN as Bonnie notes *there [is] so much to keep in your head, everyone getting the right thing*. Any administration of vaccine outside the guidelines will result in medication error, and possibly, a need for a community member to come back for another injection. At worst, a person could have an anaphylactic reaction requiring emergency resuscitation, or, they could get an injection that will not give them protection against disease.

We hope that immunization staff coming from other areas will have enough time to read the information about the vaccines before they get to the clinic. The provincial public health nursing staff has prepared an electronic educational module that all immunization staff can view. We skim over this module in addition to the vaccine-specific information and hope that other immunizers can do the same.

We will likely receive our own dose of vaccine at the start of the clinic, as this is our usual practice. We are fully aware that we will not have much, if any, protection from H1N1 infection for about 10 days after we receive our vaccine. A second dose of vaccine

is needed before full immunity is likely. We wonder how many clinics we'll be scheduled to work before full immunity is achieved. We think about who'll look after our families, and our job responsibilities, if we get sick. We think about what we'll do if our family members get sick. We're more than just pandemic staff, we're mothers, daughters, home visitors to families with newborns, school nurses, and well child clinic immunizers. Our roles cross many boundaries in the communities where we work, and for some of us, where we live. Bonnie notices a reaction to her vaccination: *the only time I really reacted to having a flu vaccine. I [feel] the heat coming off my arm [even after a week](Bonnie)*. Not only will protection from the vaccine take time, we work with sore arms.

There is a lot to think about before the first clinics start, and a lot to prepare for. With such short notice, there is added pressure to get everything sorted out. This is big and it's happening fast.

### ***The First Days of Immunizing***

Just like we first hear about the arrival of vaccine through the media, we hear on the news, on the eve of our first clinics, that a teen has died from the H1N1. Common themes in the media around this time include *fear and panic, long line ups and vaccine shortages (Spike)*. There seems to be a focus on the negatives of the clinic experience in the media, not on how hard we're working to manage the realities of the situation. It's an interesting relationship we have with members of the media, we count on them to get the word out about where, when, and to whom vaccine is available, yet they also report stories that will stir interest over and above that. It's difficult to hear the negatives but they are critical issues to reflect on as we proceed.

There are multiple levels of media commenting on pH1N1 immunization: international, national, provincial, and local. There are also multiple formats of media: print, television, and social. Community members are exposed to a variety of information sources based on their access and interests. We know there can be confusing and conflicting stories, so it's not unexpected that there's now a communications department that will work with the media to disseminate other kinds of information (Health Quality Council of Alberta, 2010). At our local level, however, we're unsure of what our role with the media ought to be. If we want to submit anything to our local newspapers, we're advised to get approval from the communications department. It's difficult to know how to respond to community members when they ask questions about what's happening. Sarah says, *there was a lot of autonomy before, now [there's] so much control and the community [is] very angry about that. They [think] I am not providing enough information to them, but there really [isn't] anything I can do (Sarah).*

We arrive at the local senior's center an hour before the clinic is scheduled to start, and we see a line of people already standing and waiting. The line extends down the street and around the corner. It's very disconcerting not knowing where the line ends. It's cold with a windy sleet beating down. We see the faces of the young and old, and for the nurses that work regularly in the community, almost all those faces are known. Almost all the people who are waiting know their local PHN as well. Some are close friends, colleagues, or family members. Elizabeth scans the crowd and sees Mrs. A. Mrs. A has had a double mastectomy so needs to have her injection in her leg. The disruption in lymph nodes on the torso from her procedure makes an arm injection less likely to promote protection from the vaccine (National Advisory Committee on Immunization,

Public Health Agency of Canada, & Travel, 2020). *There's one lady's washroom in the building (Elizabeth)*. This is the only space where Mrs. A can be immunized in private. *There are just two stalls, I've never been in the men's but I'm sure it's only got two stalls, so that's all there is for the amount of people coming through (Elizabeth)*. It becomes painfully evident that the privacy and comfort of the community members is not ideally served with this choice of building. Elizabeth also recognizes doctors from the local medical clinic and plans to get them immunized as quickly as possible so they can get back to work. Elizabeth's depth of knowledge about her neighbors, friends, family, and community members waiting in line help her to deliver efficient nursing care. However, this knowledge also makes immunizing these folks more complicated to negotiate due to limitations in the clinic space and the considerable number of people waiting in line.

For the nurses that have been sent to help, they are also known, but known as outsiders. Spike shares how difficult it is to work as an outsider in a rural clinic when she tries to explain how the pandemic clinic is different from a seasonal influenza clinic: *they know the nurse from their community, so if you give an explanation as to why we can do this and why we can't do this, they say, well I'm going to talk to my community nurse (Spike)*. Sarah says nursing in a rural community is personal, *community members know who you are, and trust you because [they've] seen you a few times. Once they trust you it goes a long way to lending credibility (Sarah)*. There can be pressures on outsiders to demonstrate their trustworthiness and credibility in a rural community. The local nurse doesn't have to negotiate this if she's seen as an insider (Long & Weinert, 2018). Spike has the insight to realize that she will not automatically be trusted when she helps in other rural clinics, so when a community member wants time with the local nurse, she

understands where this is coming from and sets out to bring the local nurse over to her station.

Windy Lady looks out over the crowds and *feels worried sick. They can't fit into the senior's center. How are my nurses going to get everybody done and be sane? (Windy Lady)*. She decides to ask the staff at the town office across the street if she can use the large meeting room upstairs to shelter the crowds. Windy Lady says a big advantage to living and working in a rural community is that *you know your other leaders, you know how to get groups together and get things done. I knew I could call the town office because of past experiences working with disaster plans (Windy Lady)*. The staff at the town office open the large meeting room and hundreds of community members file in. In a moment of reflection once community members are sheltered, Windy Lady suddenly has a feeling of *fear because I am stepping outside my bounds (Windy Lady)*. I did not get permission from my managers to get this building, I saw the need and acted. *Are they going to fire me for this (Windy Lady)?* It's such a challenging time with health services recently reorganizing, the sense that others were taking control of our usual practices, and that we could be fired if we don't follow the right channels to get things done.

As the crowds pull out chairs and get comfortable, Windy Lady notices that some are coughing and thinks, *I immunize as you speak*. The coughing communicates the possibility that people presenting for vaccine might already be infected with the H1N1 virus. A cough can be a symptom of influenza, and it's a way the disease can spread. When Windy Lady hears the coughing, she wonders if the immunization is coming too late for some people in the community. After explaining what her plan is for the day and

asking the community members to take a number from a roll of tickets, Windy Lady returns to the senior's center to check on the set-up of the immunization space.

Our administrative support person is setting up her computer to help find healthcare numbers of community members. She works with community members to get their forms filled out accurately. She also helps us keep track of all the paperwork. We have volunteers that have worked seasonal influenza clinics before, and they prepare their work areas to receive and guide community members. The administrative support people and volunteers are the first contacts for community members after a long wait outside. Elizabeth describes her volunteers as *from the community* and *they help to keep people calm*. Administrative support staff are usually members of the community and know almost all the people coming for vaccine. Their presence, and that of the volunteers, brings a personal touch to the work of the mass clinic. It's difficult, though, to manage such a large group with time to provide that personal attention. Sarah observes her administrative support person, *who grew up in the community, lives in the community, and goes to church with people in the community, [has] a very hard time sitting at the front door and fielding questions. She's in tears almost every day. I [feel] a lot of stress for my staff (Sarah)*. Some of the clinics have a security guard in attendance. It's a rare occurrence to have someone in a security position at an influenza clinic, but the reports of long lines and some unruly behavior by some community members in the very first H1N1 clinics, quickly prompts their deployment. Elizabeth and Windy Lady did not have any security at their clinics, perhaps because their clinics were so early in the campaign. Assistance with crowd control is what we expect most from our security personnel. Windy Lady says having the space at the town office was helpful for crowd control

because *if I can keep them warm they will probably co-operate a bit more (Windy Lady)*.

Windy Lady also anticipated a large crowd and that's why she brought numbered tickets for everyone. She lets those with higher numbers know they can wait at home, rather than the town office, and come back based on her estimate that 100 people will be immunized per hour. A number system is rarely needed at rural seasonal influenza clinics, but Windy Lady's forethought proves valuable. Not only is she managing the large crowd, she has a mechanism to thin out the crowd when people are coughing. She's heard from colleagues in other communities *that they had fights going on in the line. We didn't have any of that. In [one town], they had to call the Sheriff (Windy Lady)*. Sarah observes her security person to be quite elderly and she's *afraid he's going to get hurt if there's trouble*. Sarah has *one father [who is] threatening, he [comes] to the front, to the tables, and [is] threatening* because it looks like adults are getting immunized faster than children. This is likely the case as only PHNs are seeing the families with young children. *Kids go to public health, not to an RN because public health nurses are accustomed to doing injections in the legs (Elizabeth)*. *One of my nurses [gets] into a verbal altercation with him, telling him he needs to sit down and control himself. But people don't understand, they're terrified. The security guard [is] quite concerned but he's well over eighty and he has a cane. I just want him to sit down before he gets hurt. It's so concerning for me (Sarah)*. The father *[calls] out those nurses that [are] giving to adults and [says] that I need to train them better because they can't give to kids. But people don't understand, they're terrified (Sarah)*.

Spike sees a similar situation at an urban clinic she worked at, however, with the even larger crowds *pushing closer and closer to where we were immunizing, and only*



*one security guard, we couldn't keep control. For a while [it's] the closest I've ever been to a riot (Spike).* Crowd control is an issue that really catches some of us off guard at the pandemic clinics. It's shocking to see some of the behaviors of community members desperate to receive vaccine, and to experience our reactions to those unusual behaviors.

Nursing students and nurses from other departments arrive, and Windy Lady asks the nursing instructor that accompanies the students, *do they know how to give a needle? Who's going to watch them? I don't have time to watch, I really don't (Windy Lady).* In Sarah's clinic, the students are not giving injections to children; *students are limited in what they are allowed to do, for good reason (Sara).* Usually there's time for the students to work with an experienced PHN to see and learn the complete process of immunizing all ages of community members. This'll be a learning experience for the students; however, it'll be unlike one that usually happens. Interestingly, Windy Lady didn't know that students would be coming to her clinic, and now, more immunization stations need to be set up and crowded into the senior's center space. She *grabs one of my good nurses that came down from the city and [I say] help [the instructor] help these kids. So we have a little bit of training but these kids [are getting] thrown into it, [and], they [won't] get to do the whole thing. They [won't] do the teaching (Windy Lady).* They will, however, give a lot of needles .

Spike notes that the registered nurses deployed from departments outside of public health nursing come with a checklist of skills that must be observed by an experienced PHN. Several skills on the list need to be 'checked off' before that nurse can be left to work independently. This pulls the PHN away from her own immunization work for a period and *I think that education part, that we were doing in front of the*

*public was...they [members of the community] were losing our trust. They weren't trusting us or the people that we were training (Spike).* It seems like the lack of trust comes from the sudden realization of how complex the process of administering a vaccine really is. Every step of learning to give an immunization is verbalized and demonstrated, in all its complexity, in full view of community members. The lack of simplicity of the action becomes visible to community members and doubt, or lack of trust, that just anyone can do this, creeps in. Perhaps the jolt of this perception comes from their previous experiences getting immunizations from rural PHNs that do this work in many different settings and with many different age groups. An experienced immunizer can do this work with minimal effort. Perhaps this perception comes from inexperience with getting immunizations in general, and the assumption that it can't be that difficult. Perhaps community members are simply annoyed that it takes two nurses to give one injection.

Once the clinic is set up, even though the official clinic start time has not arrived, Windy Lady opens the doors to those first in line. Her first group of community members have their numbers and they can see into the building. It doesn't make sense to wait for the clock if everyone is ready. With a twinge of awareness that again she is breaking a rule that might come back to haunt her, she decides to move forward to serve her community by starting the clinic early.

Right from the start we notice a difference from seasonal influenza clinics as community members approach the immunization stations. *You could feel the tension there, it was like a buzz, nervous energy, and frustration (Sarah).* This is turning out to be very different from seasonal influenza clinics. Seniors, for example, and those with

chronic health conditions are always prioritized for immunization with seasonal influenza vaccine. Household contacts of seniors and the chronically ill sometimes come to clinics held during the day, but mostly they came to evening or weekend clinics. Usually, the household contacts are at work, or at school, during most of the seasonal clinics. A single chair beside the immunizer is usually sufficient to accommodate people in these mass clinics. Windy Lady says that seasonal influenza clinics *were more relaxed, you didn't sit so long, and you got up to visit and socialize with those that came through*. This was different right from the start. Now, entire family units are presenting to the station for the pandemic vaccine. All persons over the age of six months are eligible for vaccine, and anyone wanting vaccine is invited to those first clinics. There's little room to move between the stations with the constant press of people around the immunization stations. People are standing outside the building, sitting briefly to receive their immunization, and then standing afterwards to wait the recommended time of 15 minutes before leaving the building. This waiting time is a standard practice after any immunization and permits the immunizer to observe for adverse reactions. This is difficult with so many people in the building. Parents are holding their small children, while trying to keep track of those that are mobile. The seniors are not accustomed to seeing so many children in their space and may be operating on the belief from seasonal influenza clinics that they ought to receive vaccines first. However, this is very different from seasonal immunization clinics. Perhaps it is shortsighted to equate the two types of clinics and try to operate them like seasonal influenza clinics.

The volume of voices grows steadily louder as the immunization stations fill up, creating a cacophony of voices and noise as children cry, parents try to soothe their

children, nurses ask questions and give instructions, and a persistent hum emanates from those waiting their turn. Some of the teenagers, and some of the adults, faint after their injections. Some faint before they get their injections. We handle fainting that happens right after the injection by making sure the person doesn't hit the floor, and the person usually recovers quickly. If fainting happens some time before or after the injection, and away from the immunization station, the situation becomes more urgent. Is this a faint, or is it something more serious like an anaphylactic reaction, a cardiac event, or something else? Did the person who fainted suffer an injury when they hit the hard floor? None of us has a community member with an anaphylactic reaction at our clinics. They are rare and somewhat preventable if we do a thorough assessment about allergies and past reactions to other immunizations. Spike says, though, *one of my fears is anaphylaxis because we are not five minutes away from hospital in some of our rural clinic sites. We had a lot of fainting, and there were a couple of clinics where they had anaphylactic reactions where they sent people in [to hospital], and one fellow who fell broke his leg (Spike)*. At least two nurses leave their stations to assess and manage a person that is on the ground. Because the room is so crowded, every action taken by the nurses is closely watched. Noise. Crowds. Crying. Fainting...chaos.

Amid the chaos, Bonnie, at her immunization station, turns her full attention toward the next family that approaches. She assesses their ages, sizes, and demeanors. Vaccine doses, administration sites, length of needles, and how much help the children might need to stay still during the procedure are being assessed. She knows this family, she visited them after their children were born and she has immunized them before in well child clinic and at school. She already has a sense of how the encounter might

unfold. When immunizing children, Bonnie works *to keep the kids happy and stress-free as you can. And parents because parents don't like it. You need to be methodical and you need to be cheerful and you need to try and put people at ease (Bonnie)*. Elizabeth says it's important to be calm, professional, and fine with kids crying: *to try to make them feel less vulnerable* by speaking in a comforting voice, explaining what is happening in a way that's appropriate to their developmental age, and by collaborating with the parent for cues about how they would like the interaction to go.

Both Bonnie and Elizabeth say that being methodical is important when immunizing as errors can occur if certain steps are missed. If a vaccine is given to a person with severe allergies, for example, they could have an anaphylactic reaction. The nurse asks about this, and other issues that can make immunization risky such as bleeding disorders or reactions to past injections. In this environment of noise, crowds, crying and chaos, being methodical is crucial, but hard. Sometimes, it seems people don't want to answer our questions as they say they just want to get done and out. The work is repetitive in many ways, but one must always be alert to the need to adjust to the situation to keep people safe. Sometimes, that means deciding to hold the vaccine and direct a person to a doctor's office, or even an emergency room equipped with equipment and staff trained to handle anaphylaxis. Telling a person who has waited several hours for an immunization that it can't be done today is heartbreaking.

The sight of all the community members that came to clinic, the sounds, the press of the bodies crowding around the immunization stations, and, in one instance, *a horrible stench coming from the back when the sewers backed up (Spike)*, brings the humanity of the situation into sharp focus. A range of emotions including frustration, anger, worry,

and fear in many of the community members, and in some of the rural PHNs, punctuate the scene. In the center of all this flurry is the hope that one could receive a treatment that involves a sharp object piercing the skin. People are enduring long waits, crowding, noise, smells, uncomfortable feelings, and pain in hope that the immunization will prevent a worse fate. It is the closeness of the rural PHNs to the co-workers and community members that amplifies the sense of obligation and commitment to work to achieve the goal of surviving a threat to our human existence. As Windy Lady so eloquently describes, immunizers *are people, not robots*. The community members presenting to the clinic are people, too. Working with, and among people, is not a mechanistic endeavor that can be accomplished in a robotic fashion. The work is close, subjective, complex, and unpredictable. Interestingly, Windy Lady notices that nurses sometimes tried to administer vaccines from behind their tables and says, *this drives me crazy to this day. If you are afraid of the public, then get out of this job. Get closer to them for heaven's sake (Windy Lady)*. Perhaps this distance is not just a matter of poor ergonomics, perhaps it is a coping mechanism to minimize the human stress of being so close to so many people in a time great need.

Pandemic immunization clinics transpired like this for five days across Alberta (Health Quality Council of Alberta, 2010). One can assume that community members wished to be immunized as efficiently and safely as possible, and that rural PHNs, who shared a particularly close relationship with their community members, wished the same. As we re-live what it was like to immunize in the first days of the pandemic campaign, one can see how challenging this goal was. There are many instances when the rural PHNs are caught between conflicting obligations: these are the rocks and the hard places.

With many more thousands of people left to be vaccinated in the province, it was apparent that something needed to change. Clinics closed altogether and we waited to hear what would be happening next.

### ***Immunizing in the Days After Re-organization***

We suspect the bad press attached to the first rounds of pH1N1 immunization influences the decision to shut down and re-organize. Long lines, vaccine shortages, and a report that a professional hockey team in the province got immunized in a private clinic (Health Quality Council of Alberta, 2010), were some of the themes appearing in the media. Crowding, fear that there might not be enough vaccine to go around, and the disconcerting realization that powerful groups could bypass the public mass clinics, are issues readily available for reflecting upon. For rural nurses working in the clinics, inadequate space, parking, staff for crowd management, and resources to manage health emergencies at the clinics, are some of the issues that we reflected on. There is a four day pause before pandemic immunization clinics opened again.

For the next five months, vaccine is delivered in a stricter, slower manner. Only people of certain ages or health conditions could present for vaccine. The Health Quality Council of Alberta could not identify who made the rules for vaccine distribution but noted that someone with an elevated level of authority made the ruling (2009). Just like the open format of mass clinics, where anyone over 6 months of age could attend, applied to all jurisdictions in the province in the first days of immunizing, the same is true for the clinics after re-organization. It seems like there is a great need to demonstrate that the rules apply to everyone, equally, across the province. Decisions are coming from the top and they are a 'one size fits all' format.

We arrive at the gymnasium of our local high school and at once appreciate that there are more places to park and that people can wait inside the building. It is likely the decision to move into schools, or other larger venues, was negotiated at a provincial level. The planning of where and when pandemic clinics will happen is still in the hands of others outside our communities. Bonnie is informed that her next clinic will be in a venue *with stairs, the access is absolutely horrible. I grew up [here], I know better places than this. Please, listen to me. I mean [they're] not using the knowledge [I] have within the community and how [we can] do this best. I [am told] I [am] overstepping my bounds (Bonnie).*

Spike is unable to work in this round of clinics because she has contracted H1N1: *I stayed in the bathroom because I couldn't make it back and forth from the bedroom to bathroom.* She reaches out by phone to a physician colleague and requests a prescription for antiviral medication. She asks a fellow PHN to pick up the prescription and drop it by her house. Spike lives in the city, so her absence, though concerning, is less obvious than it would be for the rural PHNs. It is likely that many of Spike's colleagues are not aware that she has H1N1. This privacy is easier to maintain in the urban environment. None of the other PHNs I talked to became ill with H1N1, but we all knew the potential was there. The fear of getting sick, and the fear of losing a colleague or loved one, is excruciating.

These first clinics in the re-organization are for pregnant women and children aged 6 months to 1 year. We're told we can't make any exceptions and imagine that if we do, our employment might be terminated. We've heard what happened to some nurses involved with the professional hockey team getting their immunizations: they lost their jobs. *Obviously you didn't want to lose your job (Bonnie).* We set our stations up, and



this time only a trickle of community members lines up for immunization. How many pregnant women can we have in our rural community? There must be children between 6 months and one year old that missed our earlier clinics. Bonnie initially surmises that families are waiting until they can bring all their family members in, because of the amount of time and money required to make multiple trips. When she reflects further, however, she proposes another idea: *maybe there's a bit of guilt. Protect one and the other one isn't protected (Bonnie)*. We all go together, or we don't go at all.

The volunteers take on another role in these clinics. They are asked to make sure people entering the clinic are only those that are eligible. Many people challenge the volunteers and ask to speak to the local PHN to discuss their situations. People report that their doctors told them they can't wait for the vaccine, or that they are travelling to their winter home in the U.S. and need their vaccine or, that as a senior they always get influenza vaccines first. Spike says she *has a hard time trying to justify the rules for all the different categories*, but she follows them. *I knew people who were there, I'm related to some of them. It's hard to explain to them that these are the rules. You couldn't break the rules because if you broke for one, I mean, people in a small community are talking (Spike)*. Windy Lady tells a parent pressuring her to immunize her one eligible, and one ineligible, child that *if I do I lose my job. Do you want me here next year or not?* Windy Lady is relieved when the parent doesn't push further. Bonnie describes an experience she has with an elderly couple. The wife has cancer, *is very, very frail, and he's crying because I'm saying you don't fit the criteria. I mean, all he wants to do is keep his wife alive and I'm the controller, saying no. It's hard when you know people's situations and you're denying [them]. You know [them]. That's the hardest thing. Denying. (Bonnie)*.

There's more regular assignment of security personnel to this round of clinics. It was shocking to hear threatening shouting, and hear about fist fights between community members, at some of the first clinics. Since the pause between the first and second rounds we've heard more concerning incidents involving the treatment of volunteers and staff. Spike reports *nurses in the lines, they were not public health nurses but I knew personally they had a nursing background. They told us we were incompetent leaving all these old people outside in the cold. They berated us like you can't believe (Spike)*. One volunteer was spat on. Many people saved their numbers at the clinics and passed them on to friends. *So we would call number 50 and three people would stand up. And some of the people that were sitting realized that he just came in (Spike)*. Spike goes on to say it was *getting really quite nasty, and people were going to fight to get it [the vaccine]*. There is danger of physical and emotional harm, as well as the risk of contracting H1N1, at these clinics. These risks are a reality for any person attending the clinics. Security personnel are a welcome sight.

The security personnel help the volunteers to limit entry to only those that were eligible for vaccine. It's interesting that sometimes even a person in uniform is not enough to convince some people to come back on another day. This is especially noticeable when a PHN, usually the local nurse, is drawn away from her immunization station to confirm the rules as people seek to make their cases. Complicating the situation, these conversation can take place near the immunization stations. Community members can see some nurses sitting idle at their stations. Windy Lady explains how confusing it is for the community members and how uncomfortable it is for us: *they see nurses twiddling their thumbs and sitting there because we [don't] have the population*

*for them to immunize. Then they [community members] were mad. How could we justify turning people away when there was obviously vaccine and staff available to give vaccine?*

Bonnie saw some people normally hesitant to get vaccinated coming to the clinic. She would have preferred to immunize these hesitant community members *since this is my whole public health philosophy. I will work with hesitant people...for years...to get them immunized (Bonnie)*, but the rules were too rigid to make accommodations. She goes on to say, *you could understand why they were doing it in the cities, but it wasn't working for our communities. Everything was really come down from up above (Bonnie)*. Windy Lady agrees, saying *this is a different type of nursing, it is not city nursing. You can't say what works in the big city is fine for the town. It is not!* Sarah says *when you work in a rural community, you take a feeling of ownership for those in the community. They are going to come back to you after the event and ask why certain decisions were made, because you are the face of it, not those other individuals [that make the rules] (Sarah)*.

Some community members went to the federal health centers on neighboring Indigenous lands *because they had vaccine...and they were a little more open with things (Bonnie)*. This is disconcerting. One can imagine what it might have been like for the federal nurses to see people coming for vaccine especially earmarked for their unique community members. Elizabeth can relate to the situation when she sees a bus arrive *with a hundred people on it. That bus [came] from the city because we were one of the first ones [immunization clinics]. I know you are trying to go south for the winter, but why?*

*We need to do our community. People don't think that way, they're just thinking of protecting themselves (Elizabeth).*

The appearance of vaccine hesitant people at the clinics, the rigidity of the rules, and the observation that people (usually those with means) will travel to smaller districts to seek vaccine, are all issues that demonstrate how desperately people wanted the vaccine, and how far they would go to get it. PHNs were not able to exercise any kind of judgement to accommodate the needs of community members, and they witnessed behavior that was not conducive to social justice or the interests of the greater good over that of individuals. The relationship between the rural PHN and the community members she serves is close and can continue long after the pandemic immunization clinics. The ramifications of poor, unresponsive, unethical, or inefficient care during a pandemic could mean future immunization services are undermined. We worry about the long-term implications for the well-being of a community if trust in us or the system is lost.

Once the immunizing for each day is complete the PNHs have opportunity to discuss how things are going while they pack up supplies and paperwork. Windy Lady says *at the end of the day, there's a lot of stress, and I react just like everybody else does.* There are tears. But, *you know, it's okay, you just need to stop and breathe (Windy Lady).* Windy lady describes how she attends to her self-care by *going home to my garden [knowing] how to drop, forget it, [don't] think about it all the time.* She also sets boundaries by *not [carrying] a cell phone* and asking people she meets up with at the grocery store to *call me at work tomorrow. And most of the time they're fine with that (Windy Lady).* Spike says she's *learned to be firm with people, to make a decision and be firm.* She says, that *being honest, and admitting that I don't know what's going to happen*

*(Spike)* helps her gain trust with community members and be a more confident leader. Elizabeth says she finds she is *calm, think[s] rationally, and [is] organize[d] in [this] situation that puts all those skills to the test*. Bonnie says she is resilient in this time of urgency and change, saying *this too shall pass*. She further says this ability to be flexible and resilient is *a reason I have [lasted] for 35 years (Bonnie)*. Sarah says her *communication skills are better*, particularly with community members that are upset. She says *I can step back and allow them to be frustrated (Sarah)*, demonstrating her compassion for the people that are also stuck in a difficult situation.

Several clinics for pandemic vaccine administration in rural communities are scheduled and delivered. Each one requiring the packing and unpacking of supplies regardless of the number of attendees. Unfortunately, because the vaccine had a limited viability after mixing, doses are discarded if there are not enough attendees. This wastage, during a pandemic, is heartbreaking. The vaccination campaign for pH1N1 ended in Alberta on April 30, 2010 with just over 1,197,000 doses of vaccine administered and just over 1,018,000 left unused (Health Quality Council of Alberta, 2010). I could find no record of the number of doses wasted. In the end, pH1N1 was deemed a low impact event compared to other influenza pandemics such as the Spanish Influenza of 1918, or even other seasonal influenza outbreaks, as the mortality rate was less than one percent (Low & McGeer, 2010). These three narratives, however, reveal that immunizing during pH1N1, especially for rural PHNs in Alberta, was very impactful. The discussion that follows details an interpretation of what it was like to live this life experience.

## **Discussion**

The three narratives describe aspects of the preparation for, and then the implementation of, two kinds of clinic formats. The narratives supplied a glimpse into what it was like for rural PHNs to live that experience. From crowds and chaos, then on to rules, idleness, and awkward moments trying to justify turning people away, the work of immunizing in rural communities during pH1N1 unfolded. I saw unpreparedness, urbancentrism, the importance of trust, personal growth, and of moments moral distress as meaningful in these narratives. To further explain, I define urbancentrism, according to Stamm as quoted by Campbell, Kearns, and Patchin (2006) as the problematic belief that urban values and features can be generalized to rural settings. Also, moral distress is defined as present when a situation with moral or ethical undertones is experienced in a psychologically distressing ways (Morley, Bradbury-Jones, & Ives, 2019; Morley, Ives, Bradbury-Jones, & Irvine, 2017). In the discussion that follows, I propose that rural PHNs who immunized in the 2009 pH1N1 mass clinic were stuck between a rock and a hard place in many moments of their experience. Though, this stuck-ness interfered with the provision of efficient and ethical delivery of immunizations during pH1N1, it also resulted in a honing of leadership, communication, and coping skills.

Understanding this state of stuck-ness may help rural PHNs, community members, and planners of future pandemic clinics to better negotiate, or appreciate, the challenges of immunizing in pandemics. Stuck-ness can be described as a moment of pause when a person measures the weight of conflicting obligations before moving forward in action. Therefore, in the complex world of pandemic vaccine delivery in rural areas, nursing obligations, and the relational dimensions that color them, underscore what

it meant for a rural PHN immunizer to be stuck. A discussion of nursing obligations and relationality follows.

### ***Nursing Obligations***

Understanding obligations, the feelings that come over nurses when they see others in need, has been explored in nursing through the thoughts and writings of John Caputo (Doane & Varcoe, 2021) and his view that obligations are readily apparent through personal involvement. An objective process of rationalization is not required for obligations to be revealed. The narratives revealed obligations that the nurses felt towards their community members in pH1N1 clinics: to be prepared, to provide services that were responsive to local contexts, to promote trust in vaccinations for pH1N1 as well as vaccinations in general, and to be fair in the delivery of vaccines during a pandemic. The narratives reveal a unique position of closeness rural PHNs share with the community members they serve. Rural PHNs tend to know, and be known by, most of the community members they serve. If a nurse has lived and worked in a rural community over a prolonged period, this knowing can be especially deep. For example, PHNs can interact with community members to promote health in their homes, schools, workplaces and where they recreate, shop, or go to church. Not only does she meet people of different ages in a multitude of environments, she sees the interconnectedness between herself and her community members across time and across settings. The PHN then brings this breadth and depth of knowledge to efforts to promote health, such as administering pandemic immunizations, in a personal and meaningful way. Unfortunately, responding to obligations is not a simple endeavor. The PHNs in this study, were stuck at times, unable to move toward meeting the needs of the rural community because of the pressure

to move fast, to count on others to supply resources that would meet the needs, and the pressure to follow rules about vaccine administration that did not make sense for their communities.

### ***Relationality***

To understand obligations on a deeper level, relationality becomes an idea to explore as it may help us further understand the stuck-ness that PHNs experienced (Doane & Varcoe, 2021; Dove et al., 2017). Relationality in the context of clinical practice (Dove et al., 2017) is an approach that includes a communitarian viewpoint in navigating ethical dilemmas, within the historical, individualistic view that dominates healthcare in Western societies. With a relational lens, individuals are perceived as socially embedded in a network of others. These others include family, community, and members of social institutions. The key attributes of a relational lens are relationships, responsibility, care, and interdependence, all of which encourage actions guided by an ethic of trust and care (Dove et al., 2017). The relational lens is not meant to supersede an individualistic view but to open the reflection on ethical dilemmas in healthcare to greater responsiveness, or creativity, in navigating the delivery of healthcare. Relationality becomes an approach to nursing that incorporates pragmatism, hermeneutics, and critical awareness of how power influences practice. I contend that the rural PHNs who administered immunizations during the 2009 H1N1 pandemic lived a particularly relational existence that was at odds with a predominantly individualistic point of view of community members that attended clinics, or policy makers that set the rules that governed their clinics. Consequently, dilemmas arose for them because while they wished to practice from a relational lens, the individualistic principles espoused by



decision makers created a sense of stuck-ness: they were caught between a rock and a hard-place. However, the relational space occupied by the rural PHNs in the midst of the pandemic also afforded great opportunity for personal growth in the moments of being stuck.

Furthering this understanding, Doane and Varcoe (2007; 2008) contend that the closeness of nurses to their patients brings obligations about what a good nurse is and how she ought to behave. Beyond the most obvious obligations to be trustworthy, present, respectful, and collaborative, applying a relational lens requires consideration of contextual elements such as geography, economics, and politics. For this study, rural geography, centralization of health services, news media, and the general aura of panic in the community arising from an urgency to administer vaccine quickly, were revealed as some significant contextual issues that impacted the meanings PHNs attached to their experience. A PHN is not a free agent in the sense that she can interact with community members within the bounds of just a personal relationship. There are contextual forces that influence how a nurse delivers services, and then, her conception of who she is. The 2009 pH1N1 pandemic brought the issue of relationality as central to rural PHN's being into sharp focus. The news media was saturated with commentary about what was happening in mass immunization clinics. Politicians were making key decisions about how the clinics would be run. People from the cities were getting involved with organizing supplies and sending other nurses to the rural sites to help. The people that represented these different contextual elements of the PHNs work have always had an influence in what the rural PHN did and who they were, however, the pandemic made these

influences more visible. Though they were farther away from the PHNs in the rural communities, they still had a major influence on what happened.

## **Conclusion**

If not for the influenza pandemic in 2009, the issues of unpreparedness, urbancentrism, distrust, personal growth and moral distress while immunizing in mass, rural clinics, might not have been revealed as meaningful to the work life of rural PHNs. It would seem that the public health emergency of the pandemic brought into focus how important preparedness, responsiveness to local culture and values, trust among administrators and employees and, nurses and the clients they serve, and ethical agency are to public health nursing practice. The pressures encountered in the spaces between the rocks and hard places provided opportunity for the PHNs to see, hear, and feel their unique connectedness to community members and to contrast this with the efforts of others responding to a worldwide threat. By sharing and reflecting on what it was like to live through these pressures, one can imagine the experience was transformational for them.

The revelation the rural PHNs who immunized in mass clinics during 2009 pH1N1 outbreak were often stuck between a rock and a hard place is important to share. If community members, policy makers, and health care colleagues understand that there is more to delivering vaccines in a pandemic than quickly getting needles into arms, there may be more understanding of, and tolerance for, the complexities a rural PHN must negotiate to deliver a safe and effective vaccine. Economics, politics, ethics, and the unique challenges of immunizing in rural spaces are elements that influence how a PHN 'is' while she is immunizing. Community members, policy makers, health care

colleagues, and even rural PHNs themselves, may not recognize how important nursing obligations and relationality are to the planning and implementation of mass clinics during a pandemic until they reflect on their own pandemic immunization experiences. The more we understand a phenomenon, the better prepared we might be to respond to it. There are learnings gleaned from this discussion for future nursing practice, education, and research will be addressed these in the next chapter my thesis.

## Chapter 5: Implications and Recommendations

In this chapter I discuss the implications and recommendations of the findings of my interpretive phenomenological investigation into the meanings that rural public health nurses (PHNs) attached to their experience of immunizing in Alberta during mass clinics in the 2009 H1N1 pandemic (pH1N1). Discussion begins with a summary of the five meanings I uncovered in this study: unpreparedness, urbancentrism, mistrust, personal growth, and moral distress. Included in the discussion of meanings, I will summarize the application of my interpretation that rural PHNs experienced frequent moments of stuck-ness between a rock and hard place as they lived through the pandemic immunization clinic experience. Further, I will summarize how the intertwining of the meanings colored the experience of moments of stuck-ness. For example, in moments of unpreparedness, moments of moral distress could also be seen. One can appreciate the complexities of the mass clinic immunization experience for rural PHNs when the meanings appeared or receded in different combinations in the moments of stuck-ness. By uncovering the meanings and seeing how they exerted their pressures on moments of pause before action, I was able to progress to reflections on how this understanding might further future pandemic immunization work. Implications of the study, therefore, will be discussed after the summaries of the five meanings. A discussion of study limitations follows. Specific recommendations for future nursing practice, education, and research will then be presented. Plans for dissemination of research findings and a conclusion complete the chapter.

## **Meanings of Immunizing During a Pandemic**

A brief review of the five meanings that informed my interpretation that rural PHNs experienced moments of stuck-ness between rocks and hard places follows to frame the implications and recommendations that are discussed later in the paper.

### ***Unpreparedness***

The meaning of unpreparedness arose from the suddenness of the arrival of pandemic vaccine and the crowds that over-ran the rural clinic sites. Equating the pandemic influenza immunization clinics with seasonal influenza clinics, was a contributing factor to the unpreparedness that PHNs encountered. Immunizing on such a grand scale had never been attempted before in Canada (Low & McGeer, 2010), so it made sense to fall back on the experience of the largest mass clinics conducted in the past. However, PHNs quickly realized that immunizing during a pandemic was very different, and that many of the challenges associated with the phenomenon were unanticipated. It was difficult for the rural PHNs to meet the immunization needs of community members in the places and practices associated with seasonal influenza mass clinics. It was also difficult to have planners from outside of their communities take over many of the roles rural PHNs normally attended to. This example illustrates how the meaning of unpreparedness intertwined with the meaning of urbancentrism.

Related to unpreparedness, inefficiency in vaccine administration colors the interpretation that the rural PHNs were often stuck between rocks and hard places. The stuck-ness limited the ability to provide efficient nursing care. For example, excessive crowding could be a result of the decision of planners to open the mass clinics in the first

days of the campaign to anyone over the ages of six months of age that wanted vaccine. This is not a usual practice for mass immunization events as resources to deliver vaccines to large groups are limited. Typically, a set of recommendations from the Public Health Advisory Council of Canada outlines who would benefit from vaccination, and, who to target for vaccination first (National Advisory Committee on Immunization, Public Health Agency of Canada, & Committee to Advise on Tropical Medicine & Travel, 2020). As mentioned in Chapter Two, targeting of vaccine has been guided by a distributive justice ethic where individuals and their underlying health conditions, rather than their social determinants of health, are the criteria for vaccine delivery. While it was argued in Chapter Two that how vaccine is prioritized ought to be examined, and that social justice ethics could guide this examination, we emphasize that some sort of prioritization system must be in place. There are just too many people to immunize in a pandemic to open clinics to everyone at the same time.

Furthering the discussion of efficiency, consider that it takes about 10 minutes for an experienced PHN to assess, implement, evaluate, and document an influenza injection. This estimate is based on my experiences as a PHN immunizer in mass clinics. This 10 minutes is increased if persons arriving for vaccine have complex health conditions, or, if they are anxious, or, if they are children that need undressing to expose their legs for injection or need safe restraint. The math demonstrates that one nurse could probably immunize about six people per hour. If 5,000 people over the age of 6 months live in or around a small town, and they all decided to seek vaccine on the day after they hear a young person in Canada died from the vaccine-preventable illness, as the immunization policy stated they could in those first clinics, it would take 833 hours to immunize all of

them (5,000 x 10 minutes each ÷ 60 mins = 833 hours). If 100 nurses could be deployed to the community, this work could be done in 8.33 hours. From my experience as a working PHN in southern Alberta in 2018, the entire zone had about 100 PHNs working. This zone covers a territory from the United States border to just south of Calgary, and from the border of the provinces of British Columbia to Saskatchewan. Therefore, if all the PHNs in south zone were directed to a town of about 5,000 people for the pandemic immunization clinic, it would take them 8.33 hours (without breaks) to immunize that number of people. This time does not include the time to set the clinic up or take it down after. It is astounding that the crowds that could have presented under the initial Alberta immunization policy in 2009 were not a consideration in planning the clinics. To leave the rural PHNs, nurses deployed from other departments, student nurses, a few volunteers, and perhaps a security guard to handle this situation, seems a recipe for chaos. Indeed, this study revealed chaos did develop with plans to deliver only a few thousand doses of vaccine in the rural clinics. Several other examples of inefficiency appeared in the study with PHNs being called away from immunization duties to figure out where people could wait, to supervise the training of inexperienced nurses, to organize how student nurses would receive training and supervision, or to manage community members with questions or demands for increased service. The rock in this situation was the inflexible and inappropriate clinic policy and the hard place was the desire to immunize community members efficiently.

Efficiency, however, is just one concern when immunizing. Safety and fairness are also issues related to preparedness. Examples of safety concerns from this study include staff being incompletely vaccinated, unruly behavior of some community

members, crowding and noise making history taking difficult, and incidents of fainting, anaphylaxis, and the incident of one community member suffering a fall and broken leg. Lack of preparedness could be the rock, and moral distress around not being able to safely immunize due to the rush of campaign and the crowding, could be the hard place that nurses were up against. For the issue of fairness, urbancentrism, lack of preparedness, and moral distress, are the meanings that erupted in between the rocks and the hard places of vaccine administration.

Chapter Two examined the ethical approach that appeared to dominate the immunization policy in Alberta in 2009, namely distributive justice, and contrasted this with what a social justice approach might mean for pandemic immunization campaigns. This chapter was an in-depth analysis of the rock of a distributive justice approach and the problems that this created for immunizing in rural contexts. The hard place was the perception that the rural PHNs did not have an avenue to express their ideas about how vaccine delivery might be modified to fit their unique context. For example, they had vaccine, they had staff, they had a family present to clinic, yet they had to turn some of the family members away. Further, if all the vaccine that was mixed for clinic could not be administered under the rules, it was discarded. This study offered a glimpse into what fairness issues of the immunization experience were for the rural PHNs that lived it.

### ***Urbancentrism***

According to Stamm, as quoted by Campbell, Kearns, and Patchin (2006), urbancentrism is the problematic belief that urban values and features can be generalized to rural settings. The centralization of health services in Alberta in the months just prior to the H1N1 pandemic is a significant factor in the perception of rural PHNs that policies



did not recognize the uniqueness of the rural communities (Health Quality Council of Alberta, 2010; Musto, MacDonald, Ulrich, & Fonseca, 2020). As noted earlier, this disconnect between the rule makers and the realities of working in a rural environment may have made it difficult to enact efficient, safe, and fair immunization administration. Urbancentrism is one meaning that lurked, and intertwined with, with other meanings revealed in this study.

### ***Distrust***

The meaning of distrust, as perceived by the community members who interacted with the PHNs during pH1N1 mass clinics, was difficult for some of the rural PHNs. Accustomed to autonomy in setting clinic dates, advertising, and ordering supplies, suddenly others were taking over these activities. This left some PHNs in a demanding situation of stuck-ness during pH1N1. Indeed, scholars of rural nurse practice identify autonomy as a defining characteristic of the work rural nurse do (Bigbee, Gehrke, & Otterness, 2009; Leipert, Regan, & Plunkett, 2015; Long & Weinert, 2018). This study revealed that loss of autonomy was strange and stressful for the some of the PHNs. In addition, rural community member was accustomed to getting information and immunization services from the local PHNs. Suddenly community members were being exposed to others, others that were not automatically trusted. Further, Long and Weiner (2018) contend that rural dwellers are self-reliant and may be more resistant to accepting help from outsiders, therefore, once trust is established with a local nurse it could be difficult to transfer that trust to others. Unfortunately rural nurses and rural dwellers were placed in the uncomfortable situation of losing autonomy and relying on others. The element of mistrust, therefore, became a significant meaning.

Another example appeared when community members expressed distrust that a rural PHN was not telling them everything she could about when vaccine would be available, or when the next immunization clinics would be scheduled. Distrust intertwined with the urbancentrism of people outside the community taking over clinic planning. The PHN could not tell community members when the next clinic would be, even though this was something she always arranged herself before H1N1. Existing in this juxtaposition, my interpretation of the meanings is that this is another example of how rural PHNs were often stuck between a rock and hard place in their pandemic immunization work.

In the rural setting, I found in this study that the local PHN is the face of immunization services before, during, and after a mass immunization clinic. This finding was also described by Long (2013) in her study of the pandemic experience of PHNs in Manitoba. When community members expressed concerns that PHNs were withholding information, or that they did not know what they were doing, this was interpreted as mistrust. This mistrust could have had the effect of undermining faith in pandemic vaccine, and, had the potential to undermine faith in future immunization services. This is an important meaning for rural PHNs in this study as vaccine hesitancy is such a large concern in the work of the PHN (Dubé et al., 2013; Jarrett, Wilson, O'Leary, Eckersberger, & Larson, 2015). For a rural PHN, the same nurse is often the person that interacts with vaccine hesitant community members in a variety of contexts, for example: when the nurse visits a new baby in family, when the nurse reviews immunization records for school aged children, or when young adults seek immunization records for postsecondary school applications, or when families attend a travel clinic for

immunization and advice when leaving Canada. All these are opportunities to discuss immunization and encourage the practice throughout one's life, and at the heart of maintain an on-going relationship with community members is trust.

A break in a trusting relationship, for rural PHNs, has far-reaching consequences when one considers that the rural PHN is a generalist, may be the only PHN, or one of the only PHNs in a community, and, that the PHN might live in the community in which she serves. If trust is lost in one encounter with the rural PHN, this can bleed over into other encounters. Ultimately, the health of community members, and the well-being of the rural PHN, could be in jeopardy. Moral distress as a meaning in the pandemic immunization experience is reviewed next.

### ***Moral distress***

Moral distress appeared frequently in the participants' experiences and their associated meanings. Moral distress occurs when a situation with moral or ethical undertones is experienced in a psychologically distressing way (Morley, Bradbury-Jones, & Ives, 2019; Morley, Ives, Bradbury-Jones, & Irvine, 2017). Peter and Liaschenko (2004) contend that the closeness of nurses to the people they serve may causes nurses to be prone to moral distress. Further, when experienced, a nurse might respond by taking actions, perhaps against the rules of the situation, or, when they feel they have no choice but to abandon the person, or persons, they are serving (Peter & Liaschenko, 2004). This idea helps to explain some of the psychological rocks and hard places that rural PHNs were stuck between in 2009 pH1N1 mass clinics. Examples of moments of moral distress include seeing large numbers of community members standing in the cold. This created discomfort, with one nurse acting to secure space outside of the clinic for people to wait,

while the others made do with what they had. The nurse that sought out the waiting space experienced further distress when she realized she was not going through the proper channels, namely AHS managers, to use the space. In those moments of stuck-ness, a flurry of thought about how best to act, or not act, took place. This moment captures some of what it means to be a human in this context. I see this as a relatable moment that fosters understanding.

In addition, once she had people filling up the waiting space, she heard some people coughing. This was distressing knowing that the coughing might be putting others at risk of contracting H1N1. With the pressure from the crowds and the myriad of duties to attend to set up the clinic, the PHNs had to let some issues go. This might be distressing as this could be interpreted as abandonment of the community members.

After the first round of conversations with study participants, I felt moral distress around who ought to receive vaccines first. In a manuscript, we (Torrie, Yanicki, Sedgwick & Howard, 2021) argue that rural, and other marginalized populations such as First Nations groups, are poorly served by a distributive justice approach to vaccine delivery in Alberta in 2009. Further, we suggest a social justice approach, that recognizes inequities between privileged and marginalized groups, and that encourages a bottom-up rather than top-down process of consultation, allows for creativity in strategies to deliver vaccines which might better serve the interests of fairly administering pandemic vaccines. The writing of this manuscript illustrates how nurses might acknowledge a feeling of moral distress and then take action to seek resolution. This study, however, revealed what was like for the rural PHNs immunizing during a pandemic to experience moral distress.

### *Personal growth*

Despite the challenges of stuck-ness related to efficiency, safety, and fairness, the tensions of being caught between a rock and a hard place presented, opportunities to examine and reflect upon the values, beliefs, and assumptions that underly rural pandemic immunization practice occurred in the moments as well. Indeed, the pressure from this stuck-ness brought moments of personal growth where rural PHNs saw their leadership, organizational, and coping skills honed. This study revealed an increased understanding of the stuck-ness that rural PHNs experienced in mass pandemic immunization clinics.

The experience of immunizing in rural mass immunization clinics during pH1N1 brought opportunities for participants to experience personal growth in leadership, communication, and coping skills. Leadership by being honest and firm, communication by showing compassion, and coping through taking breaks, setting boundaries, and being patient through resilience, are the main elements of this meaning. Devereaux, McPherson, and Etowa (2020) had similar findings in their study of urban PHNs as they worked during pH1N1, and researchers today are finding comparable results in the COVID-19 pandemic (Chen et al., 2021). Hardship, and working through hardship, are not all negative experiences. There are opportunities to grow from the pressures of being caught between rocks and hard places.

Overall, working in rural pH1N1 mass immunization clinics was often like being stuck between a rock and a hard place. This stuck-ness was a function of the closeness of the rural PHNs to the community members they served and the rules that defined service provision that were implemented by persons not only geographically at a far distance

from the clinics, but as well, emotionally distant from community members. The closeness of the PHNs to the community members they served is a unique sort of closeness, formed by the generalist nature of rural public health work, and, the position of two out of five of the PHNs in this study as residents of the communities in which they worked. This stuck-ness appeared as an overall interpretation of often intertwining moments of unpreparedness, urbancentrism, distrust, personal growth, and moral distress. For example, if not for the suddenness of the availability of H1N1 vaccine and the involvement of provincial planners as the dominant decision makers about immunization policy, unpreparedness and urbancentrism might not have been so impactful in the experience of immunizing in rural communities in 2009. These issues were experienced in combination, and thus set a trajectory for how the experience might unfold. Distrust, for example, was not a usual part of immunizing in rural clinics, however, unpreparedness, urbancentrism and moral issues seemed to combine to bring distrust to the fore of the PHN experience. Personal growth is possible in any interaction with others, however, the pressures of the intensely lived situation of the H1N1 pandemic brought issues of personal skills and competencies into stark view. In a more relaxed, or routine, environment, a PHN might not be so acutely aware of what her communication or leadership skills are, or where they might be further honed. The pressures of all the contextual issues of the pandemic immunization clinics during pH1N1 seem to have exaggerated, and brought into clearer focus, the meanings in living the experience. This study revealed how the unique combination of meaningful, contextual issues intertwined to reveal an interpretation of the phenomenon of immunizing in rural mass pandemic clinics. It meant that they were often stuck between rocks and hard places. I will now

discuss some implications of this finding for future nursing practice, education, and research.

### **Implications of the Study**

This study addressed a gap in the literature around understanding the rural PHN experience of immunizing during the H1N1 pandemic in mass clinics in southern Alberta. The meanings that rural PHNs attached to their experience revealed how moments of stuck-ness negatively impacted preparedness for the task, contributed to a lack of responsiveness to local culture and practices, undermined trust, especially around the issues of vaccine hesitancy and, may have influenced confidence in the pandemic vaccine. Moral distress was also a negative experience during rural pH1N1 mass immunization clinics. The stuck-ness was, however, positive in opening the experience to examination and allowing for personal growth. Moving forward, we might apply these findings to create environments for future pandemic immunizing that ease the negativities that were experienced in 2009 and, that promote continued personal growth for future immunizers. I propose that application of understandings around nursing obligations (Dove et al., 2017) and relational practice (Doane & Varcoe, 2007, 2021) could serve both aims. This proposition guides some of the recommendations for nursing practice, education and research that appear below.

The recommendations discussed below, however, must be considered within the limitations of this study. These limitations are discussed next.

### **Limitations**

The primary limitation for this study was the inclusion of PHNs that had both rural and urban immunization experience during pH1N1. This created difficulties in

focusing on just the rural experience in the conversations, and then in the analysis of the conversations. Stricter attention to participant selection, by limiting to those PHNs with just rural experience, would have improved this. I adapted to this limitation by encouraging limitation of discussion to rural experiences in the later conversations. In addition, if urban issues arose, I encouraged participants to compare the two contexts and discuss what that meant for the rural experience. This limitation became a benefit in that it allowed for a richer exploration of the rural experiences.

Another limitation is that I narrowed participation to a convenient geographical area. Although this allowed for the in-depth understanding of some of the rural PHNs in Alberta, there may have been other insights discovered if other rural groups in Alberta could have been included. Again, comparisons would be possible that could deepen the understanding of the phenomenon of immunizing in rural areas during a pandemic.

Finally, there were other immunizers other than PHNs that participated in the mass immunization clinics during H1N1. Including their experiences in the study may have rounded out the meanings that immunizers attached to the experience. Indeed, hearing how the PHNs worked with, and supported students and other health care workers that took on unfamiliar roles and skills, prompted ideas for further research and learning. The limitations, therefore, informed recommendations for future nursing practice, education, and research. Those recommendations follow.

## **Recommendations**

There are several recommendations offered below resulting from this interpretive phenomenological study. They are grouped into the categories of nursing practice, education, and research; however the categories are inter-connected. For example,



recommendations for nursing practice may entail an educational component. These recommendations are offered to further the aim of immunizing rural community members safely, efficiently, and fairly, during a pandemic. It is assumed that if rural immunizers can practice in an environment informed by preparedness, respect for local cultures and values, transparency that promotes trust, and avenues for personal growth and ethical agency, these aims could be better met. However, it is acknowledged that pandemics are not homologous events, therefore, these recommendations are not considered to be the only ones that might inform a specific pandemic immunization situation.

### *Nursing practice*

The recommendations for nursing practice are grouped into personal, interpersonal, and contextual categories. These categories are informed by the relational inquiry work of Doane and Varcoe (2021). In a relational inquiry approach to nursing care, Doane and Varcoe recommend reflection on the meanings that nurses, community members, and leaders in organizations bring to health care situations. This reflection involves a consideration of pragmatism, power differentials between the various players, and suggests that empirical, ethical, and aesthetic, and sociopolitical ways of knowing are all of value in negotiating good nursing care (Doane & Varcoe, 2021). For an event that is as encompassing as a pandemic, this comprehensive approach appears to offer an interactive framework for negotiating the complexity of a pandemic immunization program.

**Personal.** On a personal level, nursing practice in rural pandemic clinics is informed by the values and beliefs that rural PHNs bring to mass immunization clinic work. This study revealed that rural PHNs are the face of immunization services in their

communities and that their practice occurs in full view of community members. Rural PHNs have a deep and broad knowledge of the community and the members of the community through their generalist work. This closeness impacts their ethical agency. For example, the rural PHNs in this study frequently talked about a desire to be flexible in how they deliver their services. If a person who was previously opposed to getting vaccines attends a mass clinic, the nurse would like to go the extra miles to ensure they receive service in a way that acknowledges and respects their past hesitations. Accordingly, the nurse might take more time to carefully address any questions the person might have. In other words, how the interaction occurs becomes just as important, or even more important, than the result. The rural PHN can offer this kind of care because she has such a close relationship to her community members.

This study also revealed that ethics in public health are different from biomedical ethics (Baylis, Kenny, & Sherwin, 2008; Canadian Public Health Association, 2010) in the focus on groups over individuals and the importance of social determinants of health over individual responsibility for health. I recommend that rural PHNs be included in pandemic planning opportunities to bring their perspectives on what might work best for them in implementing pandemic immunizations. This could be accomplished through committee work. Committee work is often part of the role of PHNs, and PHNs are often invited to join local school, town, or church committees with health agendas. There are also committees within the AHS organization that discuss issues such as disaster planning or pandemic planning. If rural PHNs are not invited to attend these kinds of committees, volunteering to participate is recommended. In addition, PHNs in southern Alberta have a regularly scheduled monthly meeting where topics for discussion can be proposed.

Pandemic planning could be a topic of discussion at these monthly meetings, particularly when planning mass clinics for other vaccine-preventable diseases. Comparing and contrasting what has happened in previous mass clinic experiences may lead to a broader appreciation of how they are connected and how they might best be planned for short, and long term, service provision.

Furthering the recommendations for nursing practice at a personal level, involvement in nursing organizations where PHNs could also advocate for continued discussions about pandemic immunization is recognized. These include the College and Association of Registered Nurses of Alberta, the Community Health Nurses of Alberta, the Canadian Nurses Association, or the Canadian Public Health Association. As a result of this study, I imagine that if rural PHNs are included in pandemic planning, they might advocate for families to be the unit of service for immunizations during a pandemic. I also imagine advocating for strategies of holding immunization clinics where people live, work or go to school and, immunization strategies that consider the intersecting social determinants of health that put some groups at greater risk of death when determining eligibility for vaccine. These discussions could further the pursuit of pandemic immunization services that are congruent with public health values. For rural PHNs to bring their knowledge and expertise to planning sessions, I would recommend self-reflection on what their values and beliefs are, and how these inform what good service looks like in a rural community. I also recommend fostering an ability to articulate the values and beliefs rural PHNs bring to pandemic situations , particularly as they relate to the unique social place that rural PHNs occupy, as recommended by Peter and Liaschenko (2004). To be prepared to discuss what public health values are, and how

they might relate to pandemic immunization work, with community members, nursing and other healthcare system colleagues, government leaders, or approved media contacts, seems prudent. This alludes to the category of interpersonal relationships in nursing practice.

**Interpersonal.** On an interpersonal level, this study revealed how interconnected rural PHNs are with members of the community, and, how at times, their practice is influenced by persons outside their communities such as program managers, the media, and politicians. I found that the closeness of PHNs to their rural community members brought nursing obligations to community members into a place of priority, however, the power exerted by managers and decisions makers directly influenced the actions the PHNs took. For example, the rules of eligibility for vaccine during pH1N1 were perceived as more appropriate for city dwellers. For example, perhaps there were enough pregnant women in the city to limit vaccine eligibility and keep nurses actively administering vaccine during the clinic. This was not the case for the PHNs in this study and left them in a position to deny vaccine while some nurses were visibly not immunizing. Moreover, rule breaking was perceived as punishable by loss of employment. It seemed that the communication about what to do at the clinics was very top-down, with little opportunity for the rural nurses in this study to verbalize their concerns.

Interestingly, the Incident Command System (ICS), or incident management system (Bigley & Roberts, 2001; Jensen & Thompson, 2015) includes a communication component that encourages communications up and down an organized structure. The incident command system was not spoken about in this study as a part of the pandemic

immunization experience beyond the establishment of an assessment tent in the nearest city although the Health Quality Council of Alberta (2010) identified the ICS as a significant part of the 2009 pandemic response. It is concerning that the rural PHNs in this study did not see ICS in their pandemic immunization experience, therefore I recommend that two-way communication of the ICS be used as a way for rural PHNs to speak about what is happening in their clinics, and what they might need to deliver responsive, efficient, and fair immunization service. Consider the analogy of fighting fires. The ICS grew out of fire-fighting situations. How can one direct resources to fight a fire without communication with those facing the fire? One can appreciate that a rural PHN might have to be clear on what her values and beliefs are to be able to communicate these colleagues, community members, the media, or leaders in community organizations during a pandemic. This is an example of how issues of a personal nature intertwine with interpersonal ones.

**Contextual.** The third category of nursing practice recommendation is the integration of contextual understandings into pandemic immunization work. In Alberta, this includes an appreciation of the political climate that has dominated many of the health care decisions in the history of the province. As Haddow (2016) contends, government in Alberta has been dominated by neoliberalism: the belief in individual interests, individual responsibility for health, over social concerns, and a limited role of government in the health concerns of residents, and more privatization of health services. In a neoliberal system, spending on services for the public good, such health, is discouraged in favor of a private, free market system where individuals pay for their own health services (McGregor, 2001). Services that focus on prevention or population health

are not prioritized in a system with a neoliberal approach (McGregor, 2001). Indeed, the National Advisory Committee on SARS and Public Health (2003) revealed how poorly funded public health services were across Canada, with less than 5% of the provincial health budgets going to preventative services. One can assume that a similar funding situation exists in Alberta where decreasing public services has been part of the political climate for many years. Perhaps it is no surprise that when pH1N1 appeared in Alberta, we were unprepared for mass immunization clinics. As a result of this study, I recommend rural PHNs reflect on contextual elements that influence their service provision and become involved in the political process. This involvement could include being an informed voter in local, provincial, and federal elections. It could involve participating in government surveys, or town hall meetings. Joining a political party or a community lobby group, or running for office, are other ways that nurses can discuss issues of pandemic preparedness. I suggest that PHNs need to be vocal about what privatization of immunization might mean to rural, and urban, residents so that they can make informed decisions about health services.

### **Education**

There are several recommendations for education that came from this study. I see three distinct groups that could benefit from further education about immunizing in rural communities during a pandemic: rural PHNs, immunizers from other nursing departments or other disciplines such as Licensed Practical Nurses (LPNs), pharmacists or Emergency Medical Technicians (EMTs), and students of nursing and other health disciplines. Indeed, the experience of immunizing during pH1N1 in Alberta demonstrated that PHNs are not the only group that can meet the immunization needs of community

members in a pandemic. Although nurses from other departments and students of nursing joined rural PHNs in their mass clinic work, the mathematical calculations presented earlier show that it takes about ten minutes of time with an experienced immunizer to safely receive and document an injection. Strategies that can increase the capacity for more health professionals that have injections included in their scopes of practice, seem wise to promote. I will review education recommendations next according to the three groups of potential immunizers identified.

**Rural PHNs.** For practicing rural PHNs, more education about ICS, relational inquiry, and how these ideas could facilitate efficient, responsive, and ethical care in pandemic immunization campaigns is recommended. The seasonal influenza clinics could be an opportunity for practicing the implementation of ICS, however, these clinics would have to be clearly identified as training opportunities for pandemic immunization campaigns. As I discovered in this study, pandemic clinics are different from seasonal mass immunization clinics. To equate the two is problematic for planners, immunizers, and members of the public as they set up expectations and assumptions that do not apply to the pandemic experience. Accordingly, any mass clinic that might be used for training for a worst-case scenario, such as a pandemic, could be advertised as such and perhaps have resources attached to it for education or research purposes. Including community members in the planning, implementation, and evaluation of any mass clinic seems prudent to promote services that are responsive to local cultures and practices. I am not suggesting that every seasonal influenza clinic be operated like a pandemic clinic, but I do suggest that investing in some yearly practice would be beneficial to all persons that could be affected by a pandemic. The seasonal influenza clinics are currently our largest,

regularly scheduled mass clinics. The findings of this study suggest that preparedness is meaningful to PHNs and worth pursuing for future pandemic events.

I also recommend education about mass gatherings and measures to prevent the spread of communicable diseases in these gatherings. This is an emerging topic of research and learning in recent years (Johansson et al., 2012; Tam et al., 2012; Barbeschi and Endericks, 2015) with applicability to mass immunization clinics in a pandemic situation. For example, crowd control, ways to attend to the physical and psychological health of attendees at mass gatherings, and communicable disease control are some of the issues that have been studied. This area of knowledge could be beneficial in developing nursing theory around mass immunization clinics whether they are smaller or worst-case scenario events.

**Immunizers from Other Nursing Departments or Other Health Disciplines.** Building capacity for immunizing during a pandemic must include learning opportunities for nurses outside of public health, students of nursing, and practitioners or students of allied health professionals that share injections as a common scope of practice. Again, yearly seasonal influenza clinic seems ideal learning settings where hands-on practice with skills can be developed. However, there is also the potential for PHNs to share knowledge and skills in vaccine administration with colleagues in their own work settings. Issues such as cold chain for vaccine, skills to immunize clients of different ages and sizes, and managing fainting or anaphylaxis are important to any immunization education program, and PHNs are well-versed in those issues. Since pharmacists have been working towards increasing their roles in immunization, partnering with an experienced PHN to learn about the nuances of immunization for different populations could be beneficial. For



hospitals, having nurses, or other professionals that can inject educated in vaccine administration, could mean that many vulnerable people, those in hospital settings, could get a vaccine as part of their hospital care. This would be like a blanket of protection descending on the hospital that would help be beneficial to protect all patients, staff, and visitors. Of course, any expanding of roles to include immunization would require investments of resources such as time and money. There could be resistance on the part of busy health professionals to take on another role, and, there could be hesitation on the part of PHNs to hand over work that historically been a specialty for them. These are issues worthy of discussion when considering the efficiency of future pandemic immunization campaigns.

Another recommendation is to increase public health resources such that surges in demand are better accommodated. I see benefit in this as more public health resource could lead to efforts that look at the root causes of pandemics, and perhaps develop strategies to mitigate outbreaks before they inflame into worldwide threats. With a public health eye, issues such as the social determinants of health, social justice, and a focus on prevention, could combine to stop pandemics before they start. Indeed, immunization could be perceived as an expensive, late, strategy that is rife with ethical challenges. Working upstream to mitigate pandemics could be a future role for public health nurses, particularly in rural areas where poultry and swine are produced. The H1N1 pandemic arose from the proximity of humans to swine, but closeness to poultry also puts humans at risk for illness from viruses (Chen et al., 2015; Gray & Kayali, 2009; Koegelenberg, Irusen, & Cooper, 2010).

**Students.** For students of nursing and other health disciplines that share injections as a scope of practice, inclusion in education efforts around pandemic immunization are recommended. Collaborative practice, immunization skills, and skills for managing mass clinic crowds could be incorporated into curricula or into practicum learning situations. Education around public health beliefs, values, and ethics, could open students to a view of health that focuses on prevention, social determinants of health, and social justice. This study shows that pandemic immunization campaigns are opportunities to apply these concepts to care of communities. Again the seasonal influenza immunization campaigns seem obvious opportunities for practicing skills, but knowledge and skill development in vaccine administration from a public health perspective could also be accomplished in the settings where health professionals with injection prerogatives already work. As we have seen with COVID-19, seniors in long term care facilities might be immunized in a more timely and responsive manner if the staff that work there are skilled in immunization administration. I see the blanket of protection analogy as a powerful motivator for this building of immunization capacity in communities.

What seems clear is that there will always be a need to discuss, learn, and practice immunizing in mass clinics during pandemics, or other large-scale outbreaks of vaccine preventable diseases. History has demonstrated that pandemics are recurring phenomena (Ghendon, 1994). Recommendations for areas to continue research that arose because of this study are discussed next.

## **Research**

There are many other people involved in planning, implementing and evaluating pandemic immunization campaigns. I recommend that it is valuable to study further what

it was like for rural community members to get vaccine in a mass immunization clinic during a pandemic, what it was like for nursing students to immunize in these clinics, and what it is like for nurses, or other health professionals from other departments to be deployed to work in mass pandemic immunization clinics.

Another topic that arose from this study, and not addressed in the current literature, is the issue of PHNs receiving an influx of community members from outside their jurisdictions. I wonder what this is like and how it impacts the health of local community members. Comparing rural and urban pandemic immunization experiences would also be valuable as this could lead to greater appreciation of if, or what, differences might exist.

Lastly, I see importance of further study into the effects of privatization of immunization services on the quality, cost, and ethical responsiveness of immunization administration in future pandemics. Centralization of government health services has been occurring over several years in Alberta, with 2009 a year of significant changes (Musto et al., 2020). It is important to study and understand the effects of neoliberalism on rural communities and health threats such as pandemics as they can impact entire communities.

### **Dissemination of Research Findings**

Three modes of dissemination of research findings from the study have been planned including bringing the results to a monthly meeting of PHNs in southern Alberta, presenting results at the International Rural Nursing Conference organized by the University of Alabama and scheduled for July 2021, and by seeking publication of manuscripts in scholarly journals. Results of the literature review for this study, Chapter

Two, have already been published by the international, peer viewed, Nursing Ethics journal (Torrie et al., 2021). More writing, and submissions for publication are planned to share the meanings that rural PHNs attached to their pH1N1 immunization experience. Opportunities to share findings may arise in my nursing practice setting in the current COVID-19 pandemic response.

## **Conclusion**

This study was conducted to address a gap in the nursing research around rural PHN immunization experiences in Alberta during pH1N1 in 2009. By using an interpretive phenomenology, I discovered five meanings attached to the life experience of rural PHNs: unpreparedness, urbancentrism, mistrust, personal growth, and moral distress. My interpretation of these meanings is summarized as frequents states of stuckness between a rock and hard place. The closeness of the rural PHNs to populations they serve, the nursing obligations that arose because of this closeness, and involvement of others far from the rural clinics sites in making rules and controlling communications, are examples of the rocks and hard places the nurses existing between. I recommend that incorporating relational inquiry into nursing practice may equip nurses for the complex work of future pandemic immunization campaigns. Increasing learning about ICS and mass gatherings is also recommended. I also recommend movement beyond immunization as the primary role of PHNs in protecting community members from pandemic illness towards roles that address root causes of pandemics. Until that shift occurs, research into the experiences of other people participating in mass clinics during a pandemic, including community members, students, and other health care professionals deployed to work in the clinics is recommended. Comparing the rural experience to urban

experience, investigating the phenomenon of people traveling outside their usual jurisdictions to get vaccine, and the political contexts in which pandemics are planned and implemented are also potential topics to study further.

There is no doubt that pandemics will continue to be a threat to the health of communities worldwide. Vaccination to mitigate the effects of a pandemic illness is a relatively new strategy, with H1N1, and now COVID-19, being the only events where mass immunization has been attempted. For rural PHNs that undertake this work, this study shows that preparedness, responsiveness to local cultures and practices, strategies to promote trust and personal growth, and environments that encourage ethical agency, may facilitate efficient, safe, and fair administration of vaccines.

### Appendix A: Participant demographics

Pseudonyms	Gender	Age in 2009	Years of immunization experience prior to 2009	Education	Lived in same community as worked in 2009	Knew some of the community members presenting for immunization
Elizabeth	Female	40 to 50 years	12	B.Sc.N.	Yes	Yes
Sarah	Female	40 to 50 years	4	B.N.	No	Yes
Bonnie	Female	50 – 60 years	26	B.N.	No	Yes
Spike	Female	Over 60 years	33	Diploma Public Health	No	Yes
Windy Lady	Not reported	50 – 60 years	Not reported	B.N.	Yes	Yes

## **Appendix B: Conversation Questions**

### **Conversation questions for initial interview:**

1. You were a public health nurse immunizer in rural 2009 pandemic influenza mass clinics. Please look over the newspaper articles from this time (attached) and describe for me what was it like to be a public health nurse at that time and place?
2. Describe your relationship with community members as a rural public health nurse. What are the advantages or disadvantages of working in a rural community as a public health nurse?
3. If a priority immunization system was used in your clinics, what was it like to tell clients they did not qualify for vaccine on that day and that they would need to come back when they did qualify?
4. If a priority immunization system was not used in your clinics, how did you manage the demand for vaccine with the supply of vaccine?
5. If inexperienced nurses were deployed to work with you in the rural clinic, what was this like for you?
6. Describe if, and how, the Incident Command System was utilized in the 2009 pandemic clinics?
7. What else should I hear about this experience?
8. What questions do you wish I had asked?

**Conversation questions for second interview:**

1. What was the most significant impact for you in participating in this type of clinic and why?
2. A moment of significance described by every participant in this study is when they first saw large number of people presenting for vaccine. I'd like to focus on this moment and ask you to think about your thoughts, feelings, and actions taken in that moment. What did it mean to you to see all the people coming for vaccine?
3. The clinic experience was structured in many ways by the rules, communications, and resources that were allocated to accomplish the work of immunizing. As a public health nurse in a rural area, how did the structuring of the clinics impact your ability to provide vaccine to community members?
4. The nurses describe their knowledge of the rural community as wholistic, intimate, and cross-generational. Nurses also described being well known by the community. What do you think the public expected from you as you provided immunization services during the pandemic clinics?



## Appendix C: Pandemic Newspaper Articles

# Long line-ups for flu clinic in Picture Butte

Picture Butte was one of the last communities in the region to roll out the H1N1 vaccine last week and people lined up for hours trying to get the shot.

Delivering the vaccine to the public, which have turned out in larger numbers than traditionally found at yearly flu shot clinics, has created some challenges in the province. The H1N1 vaccine ran out before everyone in line for the shot received in during clinics in

both Coaldale and Picture Butte last week.

On Friday people were lined up outside the community/seniors centre in Picture Butte as early as four hours ahead of the actual opening of the clinic and many stood in line for hours to receive their shot.

Anne Gibbons was in line by just after 9 a.m. and said already 40 to 50 people were waiting, but some were obviously saving space for more people

as the number of people ahead of her doubled by the time the doors opened.

The line-up behind Gibbons had grown to about 400 when the clinic opened and she was glad she'd arrived with chairs for her and her friends to use during the long wait.

"It made the time go a little quicker."

She said she felt bad for the young mothers and little children waiting out in the cold and

felt the clinic could have been better organized with a separate location for high risk people who should get the shot first.

Gibbons said there is a lot of conflicting information on the impact of the H1N1 and she felt a real paranoia evident in the crowd waiting for the vaccine. She was advised by her doctor to get the shot because she will soon be flying to Vancouver where there have already been more confirmed cases of H1N1.

She praised health care staff who quickly and efficiently delivered the vaccines once people were inside the doors.

Across the region schools are addressing the potential outbreak of both the traditional flu and the H1N1 flu by fostering awareness among staff and students as to the proper way to wash their hands, cough and deal with symptoms.

❖ Turn to **ABSENTEE, 3**

## Absentee rates have reached as high as 25 per cent

❖ Continued from **Page 1**

Barbara Gammon, Associate Superintendent - Learning Services for Palliser Regional Schools, said a number of schools have reported student absents in the 10 per cent or higher range over the past week due to seasonal flu and colds. A few schools have reached as high as 20 to 25 on some days.

"It's very wide spread."

She said the school district is working closely with the province and has implemented recommendations for stopping the spread of the flu by installing hand sanitizers in all schools and asking parents to keep sick kids at home.

"We have teleconferenced regularly with Alberta Health."



SUNNY SOUTH NEWS PHOTO BY KATHY BLY

**CLINIC DAY:** Hundreds of people lined up for the flu clinic in Picture Butte Friday afternoon. The line started to form hours before the clinic even opened and parking spaces were filled up several blocks in and around the community centre for hours. The line up snaked along the building down the alley and parallel to the former rail road tracks.

The Sunny South News. Coaldale, Alberta. Tuesday, November 3, 2009

**Who To Call:**

**PUBLISHER:** Coleen Campbell - 223-2266

**REPORTER:** Kathy Bly - 732-4045/345-3081

**E-mail:** ssnews@shawbiz.ca

# OPINION

THE NEWS Says:

## Pandemic fear leaves many without flu shot

Health officials have been warning of the impending arrival of a flu pandemic for the last decade. It appears their warnings did not go unheeded.

As soon as the word pandemic was associated with the roll out of H1N1 influenza vaccine a certain percentage of the population took the message to heart and flooded local flu shot clinics. Across the region last week clinics were dealing with long line-ups and a shortage of the H1N1 vaccine.

While a number of people were lining up for the seasonal flu vaccine, numbers were swelled by those specifically seeking the H1N1 vaccine.

Despite Alberta Health and Wellness and Alberta Health Services plea for only those most at risk to attend the first round of clinics last week there

were hundreds of people every day who simply didn't listen or didn't care and lined up anyway.

Public health officials announced on Oct. 22 that the H1N1 vaccine would be made available at local clinics. It seems at that point a little mass fear settled into the region and people, who really could have waited a couple of weeks, swarmed local clinics.

People waited in line for hours with many turned away in the end because there wasn't enough vaccine. Health

**While Alberta Health has to take some blame for the long wait times and shortage of vaccines, local residents also have to take some responsibility for their own actions.**

officials seemed to have been caught off guard by the number of people who wanted the vaccine. It seems ironic that the same organization that has been warning of the potential for a world wide flu pandemic is surprised when hundreds and hundreds of people

line up for hours to get the vaccine that will protect them from the pandemic. It appears someone was listening to all those warnings for the past 10 years.


While Alberta Health has to take some blame for the long wait times and shortage of vaccines, local residents

also have to take some responsibility for their own actions. Clinics in rural areas report an influx of people from out of the region traveling in for flu shots, hoping it seems to avoid the long line ups to be found in urban centres.

Clinics are open to the public, so there is no real means of turning anyone away but common sense and a little moral character would go a long way to cutting down the line ups if those who really aren't in the high risk categories would stay away until the first round of clinics are over.


Let's just hope no young children, expectant mothers or those with chronic health conditions have to battle for their lives later this winter because they weren't able to get the vaccine because someone was too selfish or too self-important to wait their turn.

The Sunny South News. Coaldale, Alberta. Tuesday, November 3, 2009

 **Alberta Health Services**

Important update on the  
**H1N1 vaccine**


Due to the unexpected national shortage of the H1N1 vaccine, Alberta Health Services has begun a targeted plan to provide immunization to high-risk groups.

 **For the most current information on the staged vaccination campaign, including clinic dates and high-risk groups eligible for vaccination, go to our website:**

**www.albertahealthservices.ca**

Or call Health Link Alberta • Toll-free: 1-866-408-5465  
Edmonton: 780-408-5465 • Calgary: 403-943-5465

**PLEASE NOTE:**  
Immunization will not be available to the general public while there is a shortage of H1N1 vaccine. Because of the shortage, proof of age (Health Care Card or birth certificate) must be provided.  
To ensure access for all of those in high-risk groups, **no exceptions can be allowed.** More high-risk groups will be immunized as more vaccine becomes available, followed by the general public.

 **Alberta Health Services** **H1N1 and Seasonal**

**INFLUENZA UPDATE**

Alberta Health Services has opened an **INFLUENZA ASSESSMENT CENTRE (IAC)** in your area.

If you are suffering from symptoms of influenza:

Visit **www.albertahealthservices.ca** for self-care information and local IAC details.

Call **HEALTH LINK ALBERTA** for advice on managing symptoms and accessing services.

Toll free: **1-866-408-5465**  
In Edmonton: **1-780-408-5465**  
In Calgary: **1-403-943-5465**

Call your family doctor

**Symptoms of influenza include:** Fever, cough, muscle aches, lethargy, lack of appetite

**H1N1 AND SEASONAL INFLUENZA INFORMATION AT:**  
**www.albertahealthservices.ca**

The Sunny South News. Coaldale, Alberta. Tuesday, November 10, 2009

# Local H1N1 clinics open

As of Monday the H1N1 vaccine has become available for all Albertans over the age of six months.

Vaccination clinics will open in Coaldale and Picture Butte this week. As Alberta Health Services once again expands the list of who can receive the shots more and more people are expected to attend the local clinics.

In Picture Butte the clinic will run today, Tuesday from 1 to 6 p.m. at the Trinity United Church. In Coaldale the clinic runs tomorrow, Wednesday from 1 to 6 p.m. at the Mennonite Brethren Church at 2114-18th Street.

As of Friday the province had approximately 500,000 doses of vaccine

on hand and were expecting to receive regular shipments through December in order to immunize up to 50,000 people per day. Over the next couple of months, all Albertans who want to be immunized will have the opportunity to receive the vaccine. Over 650,000 Albertans have already been immunized.

Last week Alberta Health Services reported a reduction in the community spread of the virus, resulting in the closure of the influenza assessment centre in Lethbridge. The province will continue to monitor emergency and urgent care patient volumes and could reopen the assessment centre if needed.

The Sunny South News. Coaldale, Alberta. Tuesday, November 24, 2009

## Appendix D: Consent Form



### PARTICIPANT CONSENT FORM

**Title of Study:** Public Health Nurses in Rural Communities Immunize During Influenza Pandemics: What meanings do they attach to the experience?

**Principal Investigator:** Carmen Radisic (403) 327-4131

**Research Supervisor:** Dr. Monique Sedgwick

**University of Alberta Ethics ID #** Pro00085270

**Why am I being asked to take part in this research study?** You are being asked to be in this study because you were a public health nurse that worked in mass immunization clinics during the 2009 H1N1 influenza pandemic in a rural part of southern Alberta. This was the first time in history that immunizations for a pandemic influenza outbreak were made available to all residents over the age of 6 months old in the province, and indeed the whole country. Public health nurses were the main providers of immunizations during the pandemic clinics. I am interested in learning what this experience meant to you as an immunizing nurse in a rural community. This study could inform future mass immunization clinic planning.

Before you decide about participating in this study the I, the principal investigator, will go over this form with you. You are encouraged to ask questions if you feel anything needs to be made clearer.

**What is the reason for doing the study?** Influenza pandemics are rare events that can cause illness or death on a large scale. Giving vaccinations before the influenza virus appears in the community can protect community members from possible illness or death. There has been research done related to mass immunizations during pandemic influenza, but very little has focused on the what this was like for the nurses that provided this service. There has been no research found that asks Alberta nurses, or rural Alberta nurses, what this experience was like for them. Rural public health nurses have a unique role in the communities where they work because they are generalists and they are known as nurses that provide immunizations. This research will encourage nurses to talk about what the experience of immunizing during a worldwide influenza pandemic was like,

how it affected their work now, and how this experience can inform future mass immunization clinic work. This study is a requirement for myself as I work to complete a Master of Nursing degree.

**What will I be asked to do?** You will be asked to complete a questionnaire that describes yourself and your working situation in 2009. You will be asked to talk about your experiences during the 2009 H1N1 mass immunization clinics in 3 to 4 conversation sessions with me. These conversations will be guided by some questions from me, but I am mainly interested in what is important for you to talk about. I would like to interview you privately in the sites where you worked as an immunizer in 2009, or in the local library of a community that is convenient for both you and me. We will meet outside of work hours and outside of Alberta Health Services buildings. I will show you some newspaper clippings from the fall of 2009 that relate to the pandemic clinics in southern Alberta to stimulate our discussion. The conversations are expected to last from 60 to 90 minutes and they will be recorded with a voice recorder. I will turn these voice recordings into text, email them to you, and then ask you to read through and write any thoughts or insights that this reading might stir. I will then ask you to return the transcript and notes to me, by email. I would like to meet with you again for another conversation of 60 to 90 minutes to discuss what meanings your attach to your experiences. These meanings might explain why you practice the way you do now in mass immunization clinics, or they may suggest how to plan for future pandemic influenza clinics. One or two additional conversations of 60 to 90 minutes are anticipated to fully explore the topic and delve into meanings. This study is expected to start by 15 November 2018 and interviews will take place over a 4 to 6 month period.

**What are the risks and discomforts?** It is possible that talking about the experiences of immunizing during the 2009 influenza pandemic will be upsetting or stressful. I am requesting multiple interview sessions and I am requesting that you move beyond description and into personal meanings of the experience of immunizing. This could be stressful and fatiguing. Strategies to manage this potential discomfort include informing you of this risk and requesting your consent before you take part in the study. You can withdraw from the study at any time without penalty. A time limit of 90 minutes per interview has been set and I will assess your comfort during that 90 minutes. You may choose not to answer any question. If you appear distressed, or verbalize distress at any time, we can take a break, or we can discontinue the conversation. We can stop the audio recording at any time during the conversation. I will ask if we can extend the interview beyond 90 minutes if the interview has not come to a natural close by then.

Mental health services for supports, if needed are available from:

1. Southwestern Alberta Crisis Line: 1-888-787-2880 or (403) 327-7905.
2. Alberta Health Services Mental Health Walk-In Clinic, 200 5th Avenue South, Lethbridge, (403) 381-5260.
3. Employee Assistance Program (for Alberta Health Services staff) at 1-877-273-3134 or [www.workhealthlife.com](http://www.workhealthlife.com)).

My research supervisor is Dr. Monique Sedgewick, (403 332-5254 or [monique.sedgewick@uleth.ca](mailto:monique.sedgewick@uleth.ca)) and she can be contacted by research participants if there are any questions or concerns. I will be maintaining contact with my research supervisor and research committee and will promptly discuss any unexpected ethical issues that might arise during the study.

You may still be employed, living, or working in the communities where you provided immunization services during the 2009 pandemic immunization clinics. Measures to protect your privacy and the confidentiality include collecting personal information only to allow me to communicate with you during the study, to describe you in general terms in any research reports and to make sure you were an immunizer in south zone during the 2009 H1N1 pandemic influenza clinics. You will choose a false name that will be used in my writings. I will disguise any information such as community names or places related to work setting in any of my writings. I will be using a password protected computer and encryption to store interview transcriptions and any other electronic data related to the study. A locked cabinet in my home office will store any printed materials related to the study and I will destroy any recordings/transcripts or printed or electronic materials that could identify once our interviews are completed. An advantage to completing this study after the passage of 9 years is that you may feel more freedom to discuss the event if managers or leaders have moved to other portfolios or have retired.

I was a colleague of the potential participants for this study as I was a public health nurse in the South Zone of Alberta Health Services and I was an immunizer during the 2009 pandemic clinics. There is risk for power imbalances between us because of this relationship. It is important that you are not feeling forced to participate in this study and that we meet outside of Alberta Health Services buildings and outside of work hours to equalize this relationship.

It is not possible to know all the risks that may happen in a study, but I have taken all reasonable safeguards to minimize any known risks to a study participant.

**What are the benefits to me?** There is potential to benefit from participation in this study as you will have opportunity to describe and impart the human experience of what it was like to provide nursing care in a public health emergency. This could be cathartic. You may learn more about yourself as a nurse and use this knowledge in future

nursing student, colleague or client interactions. There is potential for this study to further the knowledge of how best to plan mass immunization clinics in rural settings from the perspective of the public health nurses that have had this direct experience.

It is possible, however, that you may not get any benefit from being in this research study.

**Do I have to take part in the study?** Being in this study is your choice. If you decide to be in the study, you can change your mind and stop being in the study at any time, and it will in no way affect the working relationships that you are entitled to.

You do not need to answer any questions on the questionnaire or during the conversations that you are uncomfortable with.

If you have consented to participating in the study and then need to withdraw, it is requested that you inform me as soon as possible. You can request any, or all, of the information provided in the research study to be removed at the time you withdraw. Please write this request for removal of information and email this to [c.radisic@uleth.ca](mailto:c.radisic@uleth.ca). I will send you written confirmation that the information has been withdrawn from the study.

**Will my information be kept private?** During the study I will be collecting information about you. I will do everything I can to make sure that this information is kept private and confidential. No information relating to this study that includes your name will be released outside of my office or published by me as researcher. Sometimes, by law, I may have to release your information with your name, so I cannot guarantee absolute privacy. However, I will make every legal effort to make sure that your information is kept private.

Since this study is done under the guidelines of ethical research as set by the University of Alberta, I will be following their direction to securely keep the research information (cleared of your identifying data) for a period of 5 years after the completion of the study.

**What if I have questions?** If you have any questions about the research now or later, please contact Carmen Radisic at (403) 249-6877 or [c.radisic@uleth.ca](mailto:c.radisic@uleth.ca) or Dr. Monique Sedgwick at (403) 332-5254 or [monique.sedgwick@uleth.ca](mailto:monique.sedgwick@uleth.ca).

If you have any questions regarding your rights as a research participant, you may contact the Research Ethics Office at the University of Alberta at 780-492-2615. This office has no affiliation with the study investigators.

There are no financial conflicts of interest for this study as there will be no exchange of money through funding grants, employment hours through Alberta Health Services (AHS) or the University of Lethbridge during any phase of the project.

## CONSENT

**Title of Study:** Public health nurses in rural communities immunize during influenza pandemic clinics: What meanings do they attach to this experience?

**Principal Investigator:** Carmen Radisic **email** [c.radisic@uleth.ca](mailto:c.radisic@uleth.ca)

**Phone** (403)249-6877

**Study Supervisor:** Monique Sedgwick **email** [monique.sedgwick@uleth.ca](mailto:monique.sedgwick@uleth.ca)

**Phone** (403) 332-5254

<u>Yes</u>	<u>No</u>
Do you understand that you have been asked to be in a research study?	
<input type="checkbox"/>	<input type="checkbox"/>
Have you read and received a copy of the attached Information Sheet?	
<input type="checkbox"/>	<input type="checkbox"/>
Do you understand the benefits and risks involved in taking part in this research study?	
<input type="checkbox"/>	<input type="checkbox"/>
Have you had an opportunity to ask questions and discuss this study?	
<input type="checkbox"/>	<input type="checkbox"/>
Do you understand that you are free to leave the study at any time?	
<input type="checkbox"/>	<input type="checkbox"/>
without having to give a reason and without affecting your work relationships?	
Has the issue of confidentiality been explained to you?	
<input type="checkbox"/>	<input type="checkbox"/>
Do you understand who will have access to your study information?	
<input type="checkbox"/>	<input type="checkbox"/>
Who explained this study to you?	
<hr/>	
I agree to take part in this study:	



Signature of Research Participant

\_\_\_\_\_

(Printed Name)

\_\_\_\_\_

Date: \_\_\_\_\_

I believe that the person signing this form understands what is involved in the study and voluntarily agrees to participate.

Signature of Investigator or Designee \_\_\_\_\_ Date

\_\_\_\_\_

**THE INFORMATION SHEET MUST BE ATTACHED TO THIS CONSENT FORM  
AND A COPY GIVEN TO THE RESEARCH PARTICIPANT**

### Appendix E: Analysis Table

Transcription of conversation with participant: (insert pseudonym) Date and Time:	Précis of what participant and I each said	Key concepts of interpretation	Interpretation notes

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