

ABSTRACT

NO INTENTION TO COMPLY WITH THE PNEUMOCOCCAL VACCINATION: IN THE ELDERLY

By Kristin M. Collar

The purpose of this study was to explore and describe the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years and older. Pneumococcal disease is a leading cause of serious illness in adults, particularly those 65 years of age and older. Despite numerous studies on barriers and facilitators to pneumococcal vaccination, little research has focused solely on those patients who refuse vaccination. To enhance the healthcare provider's understanding, the following research question was asked: What are the factors that influence adults, 65 years and older, when making a decision to not receive the pneumococcal vaccine?

The Health Belief Model (HBM) provided the framework for this research. A phenomenological qualitative design was used to gather narrative data in order to explore and describe their experiences. The sample was obtained through purposive convenience samples of participants who have refused a pneumococcal vaccination within the last year. The setting for data collection was determined by the participants for their convenience (home, etc.). A demographic questionnaire was utilized to aid in data collection, and semi-structured face-to-face interviews were conducted using open-ended questions. The researcher was the instrument for data collection. Interviews were audio-taped and transcribed verbatim. Data were analyzed utilizing Colaizzi's (1978) approach.

NO INTENTION TO COMPLY WITH THE
PNEUMOCOCCAL VACCINATION: IN THE ELDERLY

by

Kristin M. Collar

A Clinical Paper Submitted
In Partial Fulfillment of the Requirements
For the Degree of

Master of Science in Nursing

Family Nurse Practitioner

at

University of Wisconsin Oshkosh
Oshkosh, Wisconsin 54901-8621

May 2011

APPROVAL

Vicki Mose

Advisor

5/10/11

Date Approved

PROVOST
AND VICE CHANCELLOR

Jan R. G...

5/10/11

Date Approved

FORMAT APPROVAL

Marci Norderf

4/25/11

Date Approved

I would like to dedicate this project, with love, to my husband – Matt, my daughter – Camren, and to all of my family and friends who supported me to completion. Thank you for believing in me and for offering me more support than I could have ever imagined.

A special thanks to my husband and daughter, who made countless sacrifices and gave me the unconditional love and support I needed. To my mom, who provided endless hours of emotional support for which I can never repay. To my dad, who endured another 2 years of endless nursing talk, and his never-ending praise and support. And to my faithful yellow lab – Foster, for keeping me company during the late nights.

I would like to acknowledge and respectfully thank Dr. Vicki Moss for being my chairperson for this project. I appreciate your input and guidance in writing this paper.

TABLE OF CONTENTS

	Page
LIST OF TABLES	v
LIST OF FIGURES	vi
CHAPTER I – INTRODUCTION	1
Significance in Nursing	4
Problem Statement	5
Purpose of Study	5
Research Question	6
Definition of Terms	6
Conceptual Definitions	6
Operational Definitions	6
Assumptions	7
Summary	7
CHAPTER II – THEORETICAL FRAMEWORK AND LITERATURE REVIEW	8
Introduction	8
Theoretical Framework	8
Self Efficacy	12
Case Study	12
Literature Review	14
Individual Perceptions	14
Modifying Factors	17
Likelihood of Action	18
Summary	20
CHAPTER III – METHODOLOGY	22
Introduction	22
Design of the Study	22
Population, Sample, and Setting	22
Data Collection Instruments	23
Data Collection Procedures	24
Data Analysis Procedures	25
Limitations of Methodology	26
Summary	26

TABLE OF CONTENTS (Continued)

	Page
CHAPTER IV – RESULTS AND DISCUSSION	27
Introduction	27
Demographics	27
Data Analysis and Discussion	30
Theme One: Individual Perception	31
Susceptibility	32
Seriousness	33
Theme Two: Failed Cues to Action	35
Provider Endorsement	35
Asked but not Offered	37
Theme Three: Future Likelihood to Action	38
Provider Endorsement	38
When Perceptions Change	39
Not Getting It	40
Discussion of Results with Related Studies	41
Summary	44
CHAPTER V – SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	46
Introduction	46
Summary of Findings	46
Theme One: Individual Perceptions	49
Theme Two: Failed Cues to Action	49
Theme Three: Future Likelihood to Action	50
Conclusion	50
Implications	51
Nursing Practice	51
Recommendations	53
Summary	54
APPENDICES	
Appendix A. Demographic Questionnaire	55
Appendix B. Interview Guide	58
Appendix C. UW Oshkosh IRB Approval Letter	60
Appendix D. Permission from ADRC to Sample	62
Appendix E. Introduction Letter	64
Appendix F. Informed Consent	66
REFERENCES	69

LIST OF TABLES

	Page
Table 1. Demographic Data Summary	29
Table 2. Failed Perceptions and Cues to Action: Refusing the Pneumococcal Vaccine	31

LIST OF FIGURES

	Page
Figure 1. Health Belief Model	11

Chapter I

Introduction

In the United States, there were 39.6 million citizens over the age of 65 years in 2009. This is an increase of 5.1 million or 13% since 1999. It is expected that this will increase to 19% of the population by 2030 [Administration of Aging (AOA), 2010]. With the aging U.S. population, increasing numbers of adults will be at risk for vaccine preventable diseases (VPD) like pneumonia. The elderly have characteristics that put them at an increased risk for pneumococcal diseases, such as, age-related decreases in immune systems, decreased physical activity, chronic diseases, and poor nutrition. In addition, these individuals are often in nursing homes and/or hospitals, which increases their risk for contracting pneumococcal disease.

Pneumonia is an infection of the lungs that is usually caused by bacteria or virus. Globally, pneumonia causes more deaths than any other infectious disease, such as acquired immune deficiency syndrome (AIDS), malaria, or tuberculosis [Centers for Disease Control and Prevention (CDC), 1997]. Pneumococcal disease can be fatal. In some cases, it can result in long-term problems like brain damage, hearing loss, and limb loss. In 1997, the Advisory Committee on Immunization Practices (ACIP) published guidelines recommending the pneumococcal vaccine to all adults 65 years and older (CDC, 1997). According to Scheurer, Cawley, Brown, and Heffner (2006), the pneumococcal vaccine has the potential to prevent pneumonia, as it protects against 85% of serotypes responsible for invasive infections and reports a decrease in pneumonia in vaccinated patients. In 2008, 1.2 million people in the U.S. were hospitalized with pneumonia, and 52,306 people died from the disease (CDC, 2010).

Despite the fact that pneumonia can be prevented (or at least decreased) with the vaccine, consumers are choosing not to be vaccinated.

Improving pneumococcal vaccination rates is an important public health goal. Federal initiatives, like Healthy People 2010 and Healthy People 2020, have highlighted the need to focus their efforts on the vaccination of adults (U.S. Department of Health and Human Services, 2001, 2010). The Healthy People 2010 project set a goal to attain vaccination coverage of 90% of non-institutionalized persons over 65 years of age. Vaccination rates among persons aged 65 years and older continued to increase over the decade. According to the Behavioral Risk Factor Surveillance (CDC, 1999a) prevalence data, pneumococcal vaccination rates were up from 46% in 1998 to 66.9% in 2008. Despite widespread endorsements of the pneumococcal vaccination, one-third of people age 65 years and older did not receive the pneumococcal vaccine. Two-thirds of patients with serious pneumococcal disease have been hospitalized or have seen a provider within the last 4 years of illness. Robke and Woods (2010) view many of these encounters as potential errors by hospitals and providers if they did not offer or recommend the pneumococcal vaccine. Failure of hospitals and providers to establish an effective process for identifying patients in need of the pneumococcal vaccine and immunizing patients represents an opportunity for improvement (Robke & Woods, 2010).

Despite the high level of vaccination rates in the U.S., further increases in immunization rates toward the 90% goal will be difficult to achieve without an understanding of what prevents older people from being vaccinated against pneumonia. It is not only important to explore demographic information, but also issues of access, and describe and explain issues related to trust, knowledge, attitudes, beliefs, and

behaviors regarding the pneumococcal disease (Nowalk, Zimmerman, Tabbarah, Raymund, & Jewel, 2006; Raftopoulos, 2007; Santibanez et al, 2002). The above-mentioned factors that influence the elderly will be beneficial when developing educational campaigns.

Researchers have found that educational campaigns to increase vaccination rates among older adults should focus knowledge beliefs and deficits regarding symptoms of, risk for, and severity of pneumococcal disease (Madhavan, Borker, Fernandes, Amonkar, & Rosenbluth, 2003; Nowalk et al., 2006; Raftopoulos, 2007; Santibanez et al., 2002). Three different approaches to proposed public health interventions include information through media, providers, and increasing access in public venues. Any of these could remind people about the risk of having an infectious disease. However, Nowalk et al. (2006) stressed that interventions delivering vaccination messages specific to older and younger adult groups may be the best strategy for accomplishing this task.

Mayo and Cobler (2004) strongly believe that nurse practitioners (NPs) are accountable for ensuring the delivery of high-quality healthcare to their patients, including offering and educating their patients on proper immunizations. All healthcare providers should realize that the negative myths and legends about immunizations are alive and well amongst high-risk populations. Patient perceptions are driving patient behaviors, including the decision to be immunized against vaccine preventable diseases. Nurse practitioners and fellow healthcare providers are charged with the responsibility to educate, give facts, and encourage everyone to discuss perceived barriers with patients to clarify misconceptions and eventually lead to higher vaccination rates. Findings suggest that improving overall vaccination rates among eligible adults

has the potential to eliminate racial disparities (Winston, Pascale, Wortley, & Lees, 2006; Zimmerman et al., 2009).

Due to the complexity of factors associated with pneumococcal vaccination rates, no single strategy has been confirmed as the best at enhancing the vaccination rate. Multifaceted interventions seem to be more effective than simple strategies. Many essential issues concerning compliance with the pneumococcal vaccine remain unanswered. After critically reviewing the literature regarding pneumococcal vaccine compliance in the elderly, there is a conclusion that many theories and models have been developed to predict one's likelihood to comply with current recommendations. Through these models, numerous tools, interventions, and educational campaigns have been developed to increase the rate of vaccination. However, the current research often combines influenza and pneumococcal vaccinations and focuses on comparisons between those vaccinated and those not. This creates a gap. Information regarding individuals who refuse the pneumococcal vaccination is important to understanding and developing targeted tools, interventions, and educational campaigns to increase vaccination rates within resistant groups.

Significance in Nursing

Despite the efforts of healthcare professionals and public health agencies, rates of pneumococcal vaccination have been slow to show improvement. Health promotion is a basic function of nursing and is applicable to enhancing the acceptance of vaccinations. Nurse practitioners are in a unique position to promote proper vaccination in the elderly. Through a leadership role, advanced practice nurses (APNs) are able to promote optimum life-styles by fostering positive health practices. By identifying the

variables of health promotion, the APN can assess the client's status and practice strategies to promote compliance. The recognition of a person's familial and personal experience is relevant when determining variables to vaccine acceptance. This philosophy is keeping with the importance placed on patient-centered care and holistic care, which is rooted in nursing, as good healthcare practice.

A qualitative approach will be used to clarify peoples' understandings of the cause of pneumonia and the reason for refusing the pneumococcal vaccination. Through in-depth interviews, health professionals will learn more about the reasons for refusal and be able to develop better educational tools and interventions to persuade elders to get the vaccine.

Problem Statement

Pneumonia is a preventable illness that affects millions of Americans. Despite the CDC's recommendations to vaccinate all adults 65 years and older, pneumonia is still one of the top 10 leading causes of death in the United States. The majority of studies regarding pneumonia and the pneumococcal vaccine are quantitative in methodology. Furthermore, these studies focus on the contrast between those who receive vaccinations and those who do not. Focusing on individuals who do not get the vaccine will help providers understand the reluctance underlying their decisions.

Purpose of Study

The purpose of this study is to explore and describe the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years and older.

Research Question

What are the factors that influence adults, 65 years and older, when making a decision to refuse the pneumococcal vaccine?

Definition of Terms

Conceptual definitions.

Elderly: "(A)ge 65 years old and above" (Sidhu et al., 2007)

Experience: The accumulation of knowledge or skill that results from direct participation in events or activities.

Pneumococcal vaccine: The CDC website defines the pneumonia vaccine, also known as Pneumovax, as 23-valent polysaccharide vaccine (PPVSV) that is currently recommended for use in all adults who are older than 65 years of age and for persons who are 2 years and older and at high risk for disease (e.g., sickle cell disease, HIV infection, or other immunocompromising conditions). It is also recommended for use in adults 19 through 64 years of age who smoke cigarettes or who have asthma.

Operational definitions.

Elderly: An individual 65 years and older who has been offered and refused the pneumococcal vaccine.

Experience: The accumulation of knowledge or skill that results from the direct experience of being offered the pneumococcal vaccine, as reported by participants.

Pneumococcal vaccine: Is better known as the pneumonia vaccine and is recommended for those individuals who are 65 years and older.

Assumptions

1. Participants will understand and speak the English language.
2. Individuals will be honest and open throughout the interview process.
3. The pneumococcal vaccine is beneficial in the prevention of pneumonia in the elderly.
4. The elderly are at an increased risk for pneumonia.
5. Self-report interviewing is a valid way to obtain elders' views on not complying with pneumococcal vaccine recommendations.

Summary

Pneumonia is a serious and life-threatening illness and elderly patients have an increased rate of susceptibility. The pneumococcal vaccine is safe and effective. It is recommended for the elderly population, but its rate of use is not near the recommended 90%. With the elderly population increasing at such a rapid rate, primary care providers need to further research care of this special group.

The purpose of this study was to explore and describe the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years and older. In this chapter, the background, significance to nursing, problem, purpose, research question, definitions (conceptual and operational), and assumptions were presented.

Chapter II

Theoretical Framework and Literature Review

Introduction

In this chapter, the researcher discusses the use of the Health Belief Model (HBM) as the theoretical framework for this study. This chapter also provides a review of literature containing research pertinent to the polyvalent pneumococcal vaccine (PPV).

Theoretical Framework

The Health Belief Model (HBM) (Figure 1) is the theoretical framework that was used to guide this study. The HBM was developed in the 1980's by a group of social psychologists to determine why there was failure of people to participate in programs in order to prevent and predict disease (McEwen & Wills, 2007). The assumption is that people fear disease and their health actions are motivated by the degree of the fear and the benefits they may obtain. The model was modified and divided into five concepts in order to explain how individuals perceive health beliefs and their specific health behaviors. The five concepts include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and cues to action.

Perceived susceptibility is the subjective perceived risk of contracting a condition. If an individual believes they may be susceptible to contracting a health condition, they may alter their health seeking behavior. Related questions included: (a) How susceptible are you to pneumonia? (b) Are some people more susceptible, and if so,

why? and (c) Is the impact of pneumonia more serious for those who are more susceptible?

Perceived severity is the subjective perception of the severity of the health condition and understanding of the potential difficulties the condition might cause. If an individual believes the condition to be serious enough, they may change their behavior in order to prevent the condition. Does the seriousness of pneumonia alter vaccination practices? In this study, participants were asked questions regarding perceived severity: (a) How serious do you consider pneumonia? and (b) What are the difficulties that pneumonia would create for you?

The third concept is that of perceived benefits. Perceived benefits are the beliefs related to the effectiveness of a preventative action. In the case of this study, it is the participants' perceived benefits of the effectiveness of pneumococcal vaccine that determines whether they participate in the prescribed preventative action. Related questions included: (a) To who is the pneumococcal vaccine beneficial? and (b) Why?

Perceived barriers are the obstacles that individuals must overcome in order to change their behavior. Barriers can include cost, lack of knowledge, inconvenience, risk/danger, or lack of support by others whom they find important. If insurance companies provided the pneumococcal vaccine free of charge, would the elderly population be more inclined to be vaccinated? If individuals were provided information on the pneumococcal vaccine from their doctors (whom they trust), would they be more likely to obtain the vaccine than individuals who see an ad at the local Walgreens? Related questions to this study include: (a) Why did you refuse the pneumonia vaccine? and (b) If you have refused it in the past is your reason the same or different?

Cues to action represent the stimulus (external or internal) that triggers health-related behaviors (see Figure 1). Cues to action may include education or information from the media, healthcare providers, friends, or their community. They may have had personal experience with the disease or have had a significant other or someone close to them who suffered from pneumonia or even died. Elderly adults may respond to these cues if they are visible and, in return change their vaccination habits. Participants were asked questions, such as: (a) Whom or by what source of information were you prompted by to get the pneumococcal vaccine? (b) Describe how the information appealed to you, and (c) Explain why these cues still did not prompt you to get vaccination.

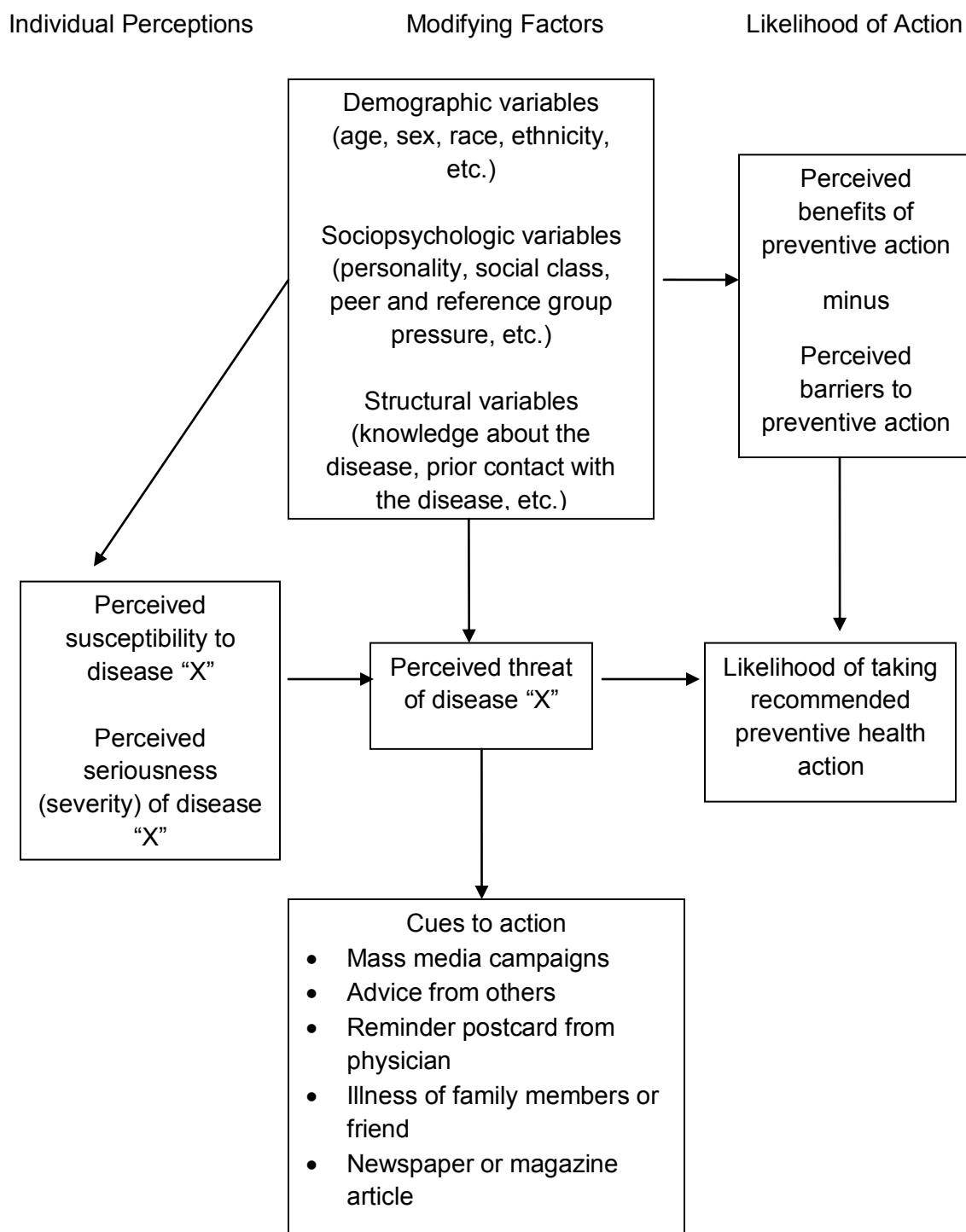


Figure 1. Health Belief Model (McEwen & Wills, 2007).

Self-efficacy.

In 1988, Rosenstock added another concept to the HBM, which he identified as self-efficacy. Self-efficacy is the ability of the individual to have confidence in him or herself to successfully carry out a desired action (in McEwen & Wills, 2007). The ability to decrease transmission and contraction of pneumonia by obtaining the pneumococcal vaccine displays self-efficacy. The participants in this study have ignored cues to action and have not realized self-efficacy because they have not been vaccinated against pneumonia.

In summary, if individuals perceive themselves to be at risk for an illness, feel the severity of the illness poses a threat to their health, are able to overcome barriers, and believe in the benefits of taking part in protective measures to avoid contracting pneumonia, they may be more likely to take actions to alter the behavior that puts them at risk. If elderly adults realize that they are at risk for pneumonia and that their current attitudes to vaccination put them and their loved ones at risk, then they may be more likely to overcome their barriers and obtain the pneumococcal vaccine.

Case Study

JP is a 72-year-old male admitted to the hospital for the third time this year with exacerbation of congestive heart failure (CHF). His past medical history includes chronic CHF, hypertension, dislipidemia, and benign prostate hyperplasia (BPH). Past surgical history consists of an appendectomy and cholecystectomy. Upon admission to the hospital, JP's nurse completes an admission database. One of the questions in the database concerns pneumococcal vaccination status. JP denies ever receiving the pneumococcal vaccine and, in fact, did not even know that there was a pneumococcal

vaccine. The nurse explains to JP that because of his age and past medical history, he is a prime candidate for the pneumococcal vaccine. JP listens, but does not really think that the vaccine is that important, especially right now. JP explains to the nurse, "I really don't think that I am as at risk for pneumonia, as you say I am. I mean I have not gotten pneumonia yet. Anyways, what is the big deal? All it is, is a really bad cold." (perceived seriousness/perceived susceptibility). The nurse explains the difference between a cold and pneumonia and stresses that pneumonia is a leading cause of death in individuals over the age of 65 years. JP again states, "I don't think I need it, but thank you for all the information."

During JP's stay at the hospital, he notices magnets hanging in his room containing information about the pneumococcal vaccine. One of the magnets is shaped like a lifesaver and states, "Vaccines save your life." Another magnet is shaped like a big question mark and reads, "Have you asked your nurse about the pneumococcal vaccine today?" In addition, he notices that each nurse who takes care of him seems to mention the pneumococcal vaccine sometime during his or her shift. He begins to think that the staff at this hospital is really trying to sell the pneumococcal vaccine.

Upon discharge, JP is asked by his nurse again if he is interested in receiving the pneumococcal vaccine prior to going home. JP explains to his nurse, "Sure, it would be easy to get the pneumonia vaccine here just so you would leave me alone but I don't think I need it. I know you have all told me I am at risk and that pneumonia is a serious illness, but I just do not agree. I mean I have not had it, I do not know anyone else who has had it, and I do not even know anyone who has gotten the vaccine. So how contagious is this pneumonia? I mean the doctor has not discussed it with me, in fact, my primary doctor has not ever mentioned it. I think if it was important for me to get the

vaccine they would have told me (cue to action). It must be important for some people or you would not make such a big deal about it, but again it is not an issue for me. I am here for my heart failure not pneumonia. I have never even had pneumonia. I just don't think that it is important to me."

The HBM will help to evaluate perceived severity, perceived susceptibility, perceived benefits, perceived barriers, and exposure to cues to action. Noting the areas in which the potential recipients fail to achieve will help lead to an understanding of the factors that influence individuals not to obtain the pneumococcal vaccine. This understanding may lead to development of tailored interventions, tools, and educational campaigns to target these individuals.

Literature Review

Patients who decide to obtain a vaccination are voluntary participants in a health-promoting behavior. The question is what makes individuals become voluntary participants in health-promoting behaviors, while others do not participate or do not participate voluntarily. Several kinds of barriers and facilitators to immunization have been reported in the literature.

Individual perceptions.

As described earlier, the CDC often places patients into high-risk groups, which correlates to those in need of vaccinations and those who do not. Previous studies have reported that older patients, with a greater number of co-morbidities and poor-self reported health, were more likely to have received the recommended adult vaccinations than those with fewer co-morbidities and better self reported health (Harris, Chin, Tincella, & Humiston, 2006; Looijmans-van den Akker et al., 2007; Nowalk et al., 2006;

Santibanez et al., 2002; Telford & Rogers, 2003; Yee, Dutta, Solin, Vapiwala, & Kao, 2010).

Santibanez et al. (2002) believed that the majority of the population did not realize how serious influenza and pneumonia could be. Participants have been surveyed on whether they had ever had pneumonia and how they would explain the symptoms. Santibanez et al. described classic pneumonia-symptoms as fever/chills, fatigue, cough, and lung congestion. Only 28% of participants acknowledged having had pneumonia and only 39% of patients were able to report one or more of the classic symptoms associated with pneumonia. A significantly higher level of unvaccinated patients reported not knowing the symptoms for pneumonia in comparison to vaccinated individuals (Looijmans-van den Akker et al., 2002; Madhavan et al., 2003; Nowalk et al., 2006; Santibanez et al. 2002; Winston et al., 2006).

Some studies have looked at specific populations who are at a greater risk for pneumonia due to their history of a chronic illness. Patients undergoing radiation or chemotherapy for cancer are a unique subpopulation of patients for whom the pneumococcal vaccination is beneficial. Yee et al. (2010) surveyed 204 patients at a university-based outpatient cancer treatment center about their vaccination practices. They were seen in consultation for or after completion of radiation therapy. The most commonly stated response for failure to obtain the pneumococcal vaccination was a failure to realize their increased susceptibility. All of the responses appeared to be correctable by simply getting the information to the patients. The authors did not discuss the clinic's process for educating patients on the pneumococcal vaccine, and therefore, it is hard to know what information the patients had received. More information is needed on how patients were approached or if patients were approached, which will help

determine if they did receive the information, but not in a way that they remembered. More information will be needed to determine how the information will be best given to older patients. Does it need to come from the doctor, and how many times do patients need to receive the information before they will obtain their vaccines?

Other studies have focused on racial and socioeconomic disparities and found that these individuals, too, did not realize the risk of not obtaining the pneumococcal vaccine and didn't realize that they were considered a targeted population for vaccination (Harris et al., 2006; Looijmans-van den Akker et al., 2007; Madhavan et al. 2003; Nowalk et al., 2006; Payaprom, Bennett, Burnard, Alabaster, & Tantipong, 2009; Winston, Pascale, Wortley, & Lees, 2006; Zimmerman et al. 2009). The majority of these studies were quantitative in nature, and information was collected through computer-assisted telephone interviews (Looijmans-van den Akker et al., 2007; Payaprom et al., 2009; Winston et al., 2006), and sample size was quite limited. Limitations for these studies often included generalizability whether it be to urban residents (Payaprom et al., 2009; Winston et al., 2006) or to the rural population (Looijmans-van den Akker et al., 2007; Nowalk, Zimmerman, Shen, Jewell, & Raymund, 2004; Zimmerman et al. 2009). These researchers separated numerous variabilities from race and education, but also added confounding criteria that makes these samples hard to breakdown. Information on a particular vaccine, rather than a combination of the pneumococcal and influenza vaccines would help to tailor the information needed for each vaccine. In addition, the information about each vaccine is not complete unless both those who have failed to obtain and those who obtained the vaccine are studied.

Modifying factors.

Few studies have solely looked at vaccination rates in comparison to practice characteristics. Zimmerman et al. (2009) designed a study to examine physician characteristics and office systems that are associated with high vaccination rates among the elderly, while accounting for variation in vaccination levels among physicians. Findings included that longer visits, support staff involved in the vaccination process, and standing orders have led to increased vaccination rates. This study would have been enhanced by looking at individuals' vaccinations rather than influenza and pneumococcal vaccination.

Additional studies showed similar findings that vaccination rates were associated with practice characteristics (Stange, Flocke & Goodwin, 1998; Zimmerman et al., 2009). In particular, much focus has been given to the impact of standing orders. Standing orders allow nurses and pharmacists to screen patients for eligibility, administer vaccinations, and observe for adverse reactions. These programs are safe and effective in increasing immunization rates in primary clinics, emergency rooms, and hospitalized and institutionalized patients (Dexter, Perkins, Maharry, Jones, & McDonald, 2004; Fedson, 1999; Raftopoulos, 2007; Robke & Woods, 2010; Zimmerman et al., 2009). Standing order programs have been endorsed by a wide variety of organizations, including the National Vaccine Advisory Committee.

Provider acknowledgement and patient education, as to the necessity for the pneumococcal vaccination, is in direct correlation to patients' compliance. Lack of knowledge, as to the existence of the pneumococcal vaccine, was a significant predictor in whether a patient had received the vaccine (Nowalk et al., 2006; Raftopoulos, 2007; Santibanez et al., 2002; Yee et al., 2010). Physicians and their medical staff need to

recognize that 88% of the respondents in Santibanez et al.'s (2002) study relied on healthcare providers as their primary information source regarding illness and immunization. Therefore, efforts focusing on knowledge deficits and beliefs would be instrumental in realizing the national immunization goals of 2010 and reduce the morbidity and mortality of the senior population associated with influenza or pneumonia. However, a logistical regression analysis would be beneficial to determine prior knowledge, and further, more staff need to document their educational efforts to determine the patients' acceptance or even acknowledgement of the information they are receiving.

Nowalk et al. (2006) agreed that a key influence in patient behavior to achieve proper vaccination status is to rely on physician recommendation. Of those who were unvaccinated, only half believed that their physician recommended vaccination. Therefore, it is important to theorize what factors prevent patients from realizing that their physicians recommended the vaccination. This was not the focus of Nowalk et al.'s study, but would be useful in helping healthcare.

Likelihood of action.

Immunization rates among certain subgroups remain below the goals set by Healthy People 2010 (U.S. Department of Health and Human Services, 2001). Research shows that there is no single solution to increase the rates for all groups, but rather there is a need for a multifaceted approach. Organizational change strategies offer the most effective methods to increase rates, along with a decrease in universal protocol to more patient-specific interventions. Establishment of separate clinics that specialize in screening and prevention, use of continuous quality improvement processes and techniques, and designation of specific prevention responsibilities to non-

physician staff have been suggested to be effective (Dexter et al., 2004; Fedson, 1999; Raftopoulos, 2007; Robke & Woods, 2010; Zimmerman et al., 2009). Other suggestions focused solely on improving influenza and pneumonia vaccination rates through the use mobile health clinics and dedicated flu clinics (Jackson, Baxter, Naleway, Belongia, & Briggs, 2009; Looijmas-van den Akker et al., 2007; Raftopoulos, 2007; Scheurer et al., 2006; Zimmerman et al., 2009). Specific vaccination clinics need further investigation as to how the public becomes aware of their services to how cost effective and how many people they reach.

The CDC's national public health education campaign focuses on the benefits associated with influenza and pneumonia vaccination as a way to increase the number of people obtaining proper immunization. The campaign is a multifaceted approach that includes public service announcements, print ads, media tours, fact sheets, online educational information, posters, and flyers. One media campaign sponsored by the CDC (1999b) is "Protect Yourself and Your Loved Ones." The message uses visuals, such as a grandparent with a child, to instill thoughts of vaccination as vaccines help to protect the ones we love. In addition, the CDC (1999b) recommends tools, like reminder/recall systems similar to the cards dentists send out, which can lead to increased vaccination rates.

Nowalk et al. (2006) published a similar descriptive study focusing on self-reported influenza and PPV rates of 365 adults, following health-center level interventions in two inner-city health centers, serving a large minority population. Interventions included patient-oriented strategies, like mailed reminders and posters in exam rooms and the community; provider-oriented strategies, including chart reminders and prompts; and system-oriented strategies, such as standing orders for nursing staff to

vaccinate eligible patients without an order; walk-in flu shot clinics; and the ability to provide vaccines free of charge. Furthermore, recommendations have been made to encourage physicians and their office staff to establish policies for assessing immunization status at all opportunities, offer express vaccination clinics, and administer adult vaccines under standing orders (Jackson et al., 2009; Looijmas-van den Akker et al., 2007; Nowalk et al., 2006; Raftopoulos, 2007; Scheurer et al., 2006; Zimmerman et al., 2009). This study, as many others (Nowalk et al. 2006; Raftopoulos, 2007; Scheurer et al., 2006; Zimmerman et al., 2009), only looked at those individuals that received the vaccine. A descriptive analysis on why individuals did not receive the vaccine would have made this study well-rounded and would appeal to all qualifying individuals.

Summary

Mostly quantitative telephone surveys have been conducted regarding patients' beliefs, attitudes, and feelings toward vaccination. Most studies also investigated the barriers and facilitators to pneumococcal vaccine in conjunction with the influenza vaccine. Another avenue of study is racial disparity found amongst the pneumococcal and influenza vaccine recipients and interventions targeted at increasing this group's rate. One of the few descriptive qualitative designs focused on the mistrust and trust issues with Black patients and vaccines. Other studies have focused on interventions, such as reminder cards, the development of databases, and patient-focused education. It has been found that the attitudes and beliefs of the patient hinge strongly on experience and their current relationship with their provider.

Although numerous studies have shed light on factors that facilitate or prevent pneumococcal vaccine, few provide the in-depth analysis that qualitative research can.

According to Silverman, Terry, Zimmerman, Nutini, and Ricci (2002), the Agency for Healthcare Research and Quality funded a study of barriers in immunization, which included a short-term qualitative data collection to assess the organizational and cultural features of selected practices and to explore their impact on adult immunizations. Silverman et al. discussed the qualitative method as an important and imperative feature in understanding adult vaccination. Telford and Rogers (2003) stated that in order to improve uptake rates, the official message promoting vaccine uptake needs to take more account into lay knowledge and the subjective assessment of the general public. Unfortunately, Telford and Roger's (2003) study examined influenza vaccination. Similarly, Payaprom et al. (2009) performed a qualitative study on Thai adults and influenza vaccines. In-depth qualitative interviews were conducted with patients who accepted and who refused the influenza vaccine. Those interviewed were concerned about maintaining their health, and had a good understanding of influenza, its transmission and prevention. The decision whether to accept or refuse the influenza vaccination was influenced by trust or mistrust of modern medicine, prior experience of vaccination, and the perceived risk from influenza.

As research has begun to explore the pneumococcal vaccine, it keeps being studied with that of the influenza vaccine, like in Raftopoulos' (2007) study on Greek elders' attitudes towards influenza and pneumococcal vaccines. Similarly, Harris et al. (2006) looked at the pneumococcal and influenza vaccination rates of the Black elderly community. No study focused solely on those who have refused the pneumococcal vaccine. There is a strong call for a qualitative study on the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years and older in the U.S.

Chapter III

Methodology

Introduction

The purpose of this study was to explore and describe the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years of age and older. In this chapter the research design, the population and sample, instruments, procedures for data collection, and analysis are presented.

Design of the Study

A qualitative descriptive phenomenological design was used in this study. Phenomenology is the study of real meaning and “phenomenological meaning brings to language perceptions of human experience with all types of phenomenon” (Speziale & Carpenter, 2007, p.75). Personal life experiences, whether from the point of view of the patient or the nurse, are important to the field of nursing. As a result, phenomenology is an appropriate research design to explore and describe the factors that influence adults, 65 years and older, when making a decision to not receive the pneumococcal vaccine.

Population, Sample, and Setting

The population of interest was adults 65 years of age and older obtained through purposive sampling. Purposive sampling allowed for the selection of adults 65 years and older who had refused the pneumococcal vaccine. This sampling method provided data rich cases and in-depth analysis of the factors that influenced these individuals not to obtain the pneumococcal vaccine. Sample size consisted of 10 eligible individuals

obtained through data saturation. This means rather than sampling a specific number of individuals to gain significance, the researcher looks for repetition and confirmation of previously collected data (Speziale & Carpenter, 2007).

The target population for this study was Midwestern adults, 65 years and older, who had refused the pneumococcal vaccine within the last year. The criteria for sample selection included:

1. The participants will be able to read, write, and speak the English language fluently.
2. The participants will have been 65 years or older at the time of refusal.
3. The participants will have been offered a pneumococcal vaccine within the last year.
4. The participants will have refused the pneumococcal vaccine.

Individuals were recruited from a Northeast Wisconsin aging and disability resource center (ADRC). Participants all met the outlined inclusion criteria.

Data Collection Instruments

A demographic questionnaire was developed to aid in data collection (Appendix A). Data were also collected by means of open-ended questions during face-to-face interviews. An interview guide (Appendix B) of several broad questions was developed by the researcher, based on the Health Belief Model and a review of literature, and was utilized to direct the interview process. To decrease bias during data collection, bracketing was employed. According to Speziale and Carpenter (2007) "Bracketing is the cognitive process of putting aside one's own beliefs, not making judgment about

what one has observed or heard and remaining open to data as they are revealed” (p. 27).

The researcher established trustworthiness of the data by focusing on the four criteria of a qualitative study (credibility, dependability, confirmability, and transferability). Credibility of findings was maintained through an exhaustive interview process, providing sufficient time for data collection, and through constant observations throughout the research process. The dependability and confirmability of the data was obtained through member checking. Member checking is asking several participants to view the analysis of themes and identify if the interpretation of the researcher is credible. This helps to establish both dependability and confirmability (Speziale & Carpenter, 2007). After themes and subthemes were developed, two participants were asked to review the findings. Both participants validated the themes and subthemes. The researcher established transferability through results that may be applicable to similar studies.

Data Collection Procedures

Prior to data collection, the researcher obtained permission to conduct this study from the UW-Oshkosh Institutional Review Board (IRB) (Appendix C). Permission was also obtained from the Northeast Wisconsin ADRC from which the participants were solicited (Appendix D). The ADRC program coordinator used scripting to introduce the researcher to different groups at the center (Appendix E). Individuals who felt they met requirements were invited to meet with the researcher on an individual basis. Potential participants were informed about the purpose of the study, the expected time commitment, the data collection procedures, confidentiality, contact information, and any potential risks or benefits. It was stressed to the individuals that participation was

voluntary and that they could choose to withdraw from the study at any time without penalty. Approval from each participant was obtained through written informed consent (Appendix F).

Data Analysis Procedures

According to Speziale and Carpenter (2007), data analysis requires the researcher to become immersed in the data. The purpose of data analysis is to preserve the uniqueness of each participant's experiences, while developing an understanding of the phenomenon being studied. During face-to-face interviews, the researcher listened to participants' verbal descriptions of their experience with the phenomenon. The researcher used Colaizzi's (1978) method to analyze the data, which consisted of the following nine steps:

1. Describe the phenomenon of interest.
2. Collect participants' descriptions of the phenomenon.
3. Read all participants' descriptions of the phenomenon.
4. Return to the original transcripts and extract significant statements.
5. Try to spell out the meaning of each significant statement.
6. Organize the aggregate formalized meanings into clusters of themes.
7. Write an exhaustive description.
8. Return to one or two participants for validation of the themes
9. If new data are revealed during the validation, incorporate them into an exhaustive description (Speziale & Carpenter, 2007, p. 83).

Limitations of Methodology

1. The small geographic location of collection may have limited findings.
2. Participants may have unintentionally responded to questions in a way that they think they should and not how they really felt.

Summary

The purpose of this qualitative study was to explore and describe the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years and older. Using an interview guide, the researcher conducted semi-structured, face-to-face interviews with adults 65 years and older, who had refused the pneumococcal vaccine. Data analysis was performed using Colaizzi's (1978) phenomenological data analysis procedure. Themes were extrapolated and the researcher returned to two participants for validation of the themes. Limitations of the study are recognized and include a small geographical location in which participants were obtained and potential response bias. It is the hope of this researcher that although there were some limitations to the study, the benefits will allow practitioners to have better insight into the experience of elderly patients who refuse the pneumococcal vaccine.

Chapter IV

Results and Discussion

Introduction

The purpose of this study was to explore and describe the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years and older. This chapter will describe the demographic data, the sample, the interview process, and findings of the study. Literature, as it relates to the findings, will be discussed and reviewed.

Demographics

A purposive, convenience sample of 10 adults, 65 years or older, was used to interview participants about their experience of refusing the pneumococcal vaccine. Participants filled out a demographic questionnaire, which included age, gender, marital status, highest level of education, household income, if they had a primary care provider, how often they see a provider in a year, and if they received the flu vaccine during the last year. The data is presented in Table 1.

Four males and six females participated, ranging in age from 65 to 89. Their current marital status varied, with the majority being married (six), other responses included widowed, divorced, and single. Participants' highest level of education also varied, ranging from some high school to college/technical school graduate. Of the 10 participants, three had some high school, three had a high school diploma, two had some college or technical school, and two had graduated from college or technical school. The majority of the participants' household incomes were over \$20,000, with

only one individual falling between \$10,000 and \$19,999. Interestingly enough, all 10 participants reported having a primary care provider, who they see between one and five times per year, with half the participants seeing them on average once a year. Lastly, the participants were evenly split on whether or not they had the influenza vaccine during the 2010 and 2011 influenza season.

Table 1.

Demographic Data Summary

Demographics	Number
Age	
65 – 69	5
70 – 74	3
75 – 79	4
80 – 84	0
85 – 89	1
Gender	
Male	4
Female	6
Marital status	
Single	1
Married	6
Divorced	1
Widowed	2
Highest level of education	
Some high school	3
High school diploma	3
Some college or technical school	2
Graduate from college or technical school	2
Approximate household income	
\$10,000 - \$19,999	1
\$20,000 - \$29,999	5
Over \$30,000	4
Has a primary care provider	
Yes	10
No	0
Average visits to provider per year	
0 – 1	5
2 – 3	3
4 – 5	2
Flu vaccine in 2010 or 2011	
Yes	5
No	5

Data Analysis and Discussion

The results of this study were based on the perceptions of adults 65 years and older who had refused a pneumococcal vaccine within the last year. The research question was: What are the factors that influence adults, 65 years and older, when making a decision to refuse the pneumococcal vaccine?

Each participant described his or her thoughts, feelings, and experiences related to refusing the pneumococcal vaccine. The interviews were audio-taped and transcribed verbatim. They were analyzed using Colaizzi's methodology for data analysis (1978). Interviews were read to acquire a feeling for the data. They were then reviewed to find and extract significant statements. Meanings were formulated from each significant statement and were organized into clusters of themes. The data were integrated into an exhaustive description of the phenomenon of refusing the pneumococcal vaccine. An overarching theme regarding the decision of adults 65 years and older to refuse the pneumococcal vaccine was formulated. Finally, two participants were approached and asked about the findings as a final validating step. Both participants agreed with the findings and stressed that it was interesting how many of the participants would have gotten the vaccine if they had just been told. These two participants had thought that their situations were unique.

Data analysis revealed that the decision of adults 65 years and older to refuse the vaccination is a process of failed perceptions and cues to action. The overarching theme for this study is: Failed perceptions and cues to action: Refusing the pneumococcal vaccine. The three main themes that emerged during analysis included: (a) individual perceptions, (b) failed cues to action, and (c) future likelihood to action.

Each major theme was supported by subthemes to further clarify and support the perceptions of the elderly. The themes and subthemes are represented in Table 2, followed by direct quotes from participants.

Table 2.

Failed Perceptions and Cues to Action: Refusing the Pneumococcal Vaccine

Themes	Subthemes
Individual perception	<ul style="list-style-type: none"> • Susceptibility • Seriousness
Failed cues to action	<ul style="list-style-type: none"> • Provider endorsement • Asked but not offered
Future likelihood to action	<ul style="list-style-type: none"> • Provider endorsement • When perceptions change • Not getting it

Theme One: Individual Perception

After participants described a situation in which they refused the pneumonia vaccine, they were asked to elaborate on their perceptions of their susceptibility to pneumonia and the severity of the disease itself. The HBM has been used to determine why people fail to participate in health maintenance initiatives, like receiving the pneumonia vaccine (McEwen & Wills, 2007). The assumption is that people who fear a disease, their future actions to prevent this illness will be based upon their degree of fear and the perceived benefits. Therefore, individual perceptions play a key role. One perception individuals consider about a disease is their belief as to their susceptibility or

perceived risk of contracting the disease. In addition, patients rely on their belief as to the seriousness of the disease and what problems contracting it will cause

Susceptibility.

Participants viewed their risk for developing pneumonia to be low based on their current and past health. It was common to hear participants reflecting upon their health. One individual said, “I don’t really think I would be at risk for it, um, I am really very healthy.” Another participant went beyond her belief that she was healthy and expressed her doctor’s belief, “He always gives me a clean bill of health without it you know.” In comparison, they viewed there to be susceptibility for others based on age and health, but not for them.

While some individuals did perceive the potential for susceptibility to be there, they viewed one’s age and current health to be a factor. Participants described individuals who they believed to be susceptible. They frequently responded by saying, “older people” and “ones with sickness.” When asked to clarify their definition of “older people” and “sickness,” there was a wide range of answers. The most consistent was “older than 65,” while others went to extremes of people over the age of 70 or 80. Although all individuals fell into the first definition of “older than 65,” participants still did not feel they were susceptible to pneumonia. One individual reflected upon the age component of vaccination, her definition of elderly, and her perceived susceptibility stating, “Well, yeah I am 65 but I am not sick and I don’t get sick and so I don’t think I am at risk for getting pneumonia.”

Participants seemed to be more consistent in their elaboration as to the definition of sickness. Individuals reported illnesses such as, diabetes, cancer, and heart conditions. When asked why those individuals were more susceptible, they thought,

“(T)heir immune systems just aren’t as strong,” but more importantly, “(B)ecause they will get it worse and will not just get sick but who knows they might get very sick, be in the hospital and even die.” One individual reflected upon a friend who has diabetes, “(W)hen she catches a little cold, she can get really sick and her blood sugars get all whack.” Another individual reflected on his sister, who has cancer, “My sister has cancer and her doctor always tells her that she can’t like get any kind of sick.” Only one participant reflected upon his current age and health and found himself at an increased susceptibility due to his diabetes. “My diabetes doctor asks, and says I should talk to the VA about getting it.” When asked about his susceptibility he said:

Why my diabetes and thinking about it, the more we talk (laughs) yeah I am.
Yeah, because I know diabetes causes a lot of problems. I had problems, well ummm, a couple of months ago and couldn’t get them [blood sugars] under control and I got arthritis problems, and all that stuff and it affects all the whole body. I was hurt until I got my numbers back down. I can’t let that happen again.
This is a good reminder.

In summary, one’s age and perceived health status factored into how susceptible these participants thought they were to contracting pneumonia. Participants described individuals over the age of 65 with co-morbid conditions, like diabetes, cancer, and heart disease, at an increased level of susceptibility in comparison to themselves. Only one participant found himself currently at an increased risk for contracting pneumonia, yet was still unvaccinated.

Seriousness.

Most participants stated they knew little about pneumonia. Many participants viewed pneumonia along the lines of a cold. One said:

I don't know that it is that big of a deal ya know, it is just like a really bad cold.

You cough a lot of stuff up and I think the doctors find it by x-rays. But if you get antibiotics, you get better.

Others echoed similar thoughts based on their own experiences, "... ya know I got pneumonia and I am just fine," and "I had it and it wasn't bad. It just made me cough a lot. I went to the doctor, got an x-ray and then antibiotics and in a few days I was better."

Although, every participant but one felt that pneumonia did not pose serious effects for them, they were mixed as to the effect that pneumonia could have on others. One individual reflected on his friend's experience with pneumonia "I had a friend who had it once and it didn't seem like it was anything different than a bad cold. The doctor just gave her a antibiotic and she got better." He went on to say, "I probably wouldn't even have went to a doctor. As long as you are healthy you should be just fine." A woman thought about the seriousness of pneumonia for her husband with diabetes, "... my husband's doctor said he might die if he got pneumonia so for some it must be really serious." Others believed the disease was "serious" and had the capability of causing "death." The conclusion of most was that "... some people just get a little sick and for others they could get very sick and die."

In summary, one's age and experience with pneumonia seemed to affect their perception as to the seriousness of the disease. Participants described pneumonia as a disease that is similar to a cold, and although there are some similar symptoms, there are reasons why individuals are diagnosed with pneumonia and not a cold. Participants seemed to be aware of the potential for death associated with pneumonia; however, they did not view the seriousness applied to them, and therefore, that factor did not motivate them to obtain the vaccine.

Theme Two: Failed Cues to Action

Cues to action represent the external or internal factors that trigger an individual to participate in a health-related behavior (McEwen & Wills, 2007). Cues to action may include media, healthcare providers, friends, and one's community. Participants were asked what other cues had encouraged getting the pneumonia vaccine, for example television (TV) or billboard ads or other healthcare providers. All participants stated it was just due to their healthcare providers promoting it, whether it was the nurses or doctors; however, they had still declined the vaccination. One individual in this study reflected upon the cues that had prompted her to get the influenza vaccine and wondered why pneumonia vaccines did not receive similar advertising: "Well, if it is a big deal I guess we should learn more about it, they have TV ads and things at Walgreens about the flu so if that pneumonia is that bad they should probably do the same."

When asked to describe why they refused the pneumococcal vaccine when offered by their healthcare provider, participant's answers seemed to fall into two categories: (a) those who did not perceive their providers as endorsing the importance of the vaccine and (b) those who seemed to get lost in the semantics of being asked about their vaccination status and actually being offered the vaccine.

Provider endorsement.

Physicians and their medical staffs should recognize that many patients rely on their healthcare provider as a primary source for information (Santibanez et al., 2002). A number of participants reported that their decision to get a vaccine would rely heavily on their healthcare provider's advice, regardless of their own views. Participants

acknowledged that at least one of their healthcare providers asked them about their vaccination status within the last year and offered them the opportunity to become vaccinated. Many patients perceive their providers attempt at offering them a vaccination as “part of their job.”

My doctor has stopped asking because he is tired of hearing no (laughing). I am sure he says he asks but he really doesn't anymore. Yea but he used to ask and all but, I always said no. It must not be that important if he stopped asking.

Another participant said, “... they just never made it a big deal and just seemed to mention it.”

Other individuals made their decisions to be vaccinated or not by their providers' lack of “pushing” to get the vaccine. “He doesn't push me to get it and never says that I really should get it, he ah just says it is recommended for people my age.” Other common responses were, “it just never seemed like ... it was that important to my doctor,” and “... he didn't seem too concerned when I said no.”

Another failed cue came from the nurse. Patients recalled nurses offering those vaccines, “The nurse said I should get it once after the age of 65 and then I would have been good.” One participant was surprised when the nurse “... said she didn't have to have a doctor's order.” Participants who had been asked by nurses recalled “respectfully” declining. They wanted to know whether their “doctor wanted” them to get the vaccine.

Lastly, other individuals identified the different approaches their healthcare providers used when offering other vaccines compared to the pneumonia vaccine. The common phrase was I was “told I should get the flu vaccine” but I was only “told that I

was a candidate for the pneumonia vaccine.” Participants viewed their provider’s stress on other vaccines as a dismissal of the pneumonia vaccine

I think he asked me about the tetanus too the last time and he said I was okay and he got me the flu vaccine. I had said I didn’t have the pneumonia but he didn’t order the pneumonia vaccine. I guess he didn’t think I needed it.

In summary, individuals looked to their healthcare providers for their recommendations, and more specifically, they were more likely to follow their doctor’s advice. Patients were okay approached by nurses, but wanted to know that the order/recommendation came from their doctors. Semantics played a particularly important role in whether or not the patient viewed their provider as just providing information about the vaccine or recommending that they get the vaccine.

Asked but not offered.

In continuing with the importance of the providers’ semantics, participants struggled with the difference between being asked if they had received the pneumococcal vaccine or had been offered it. “Ya know I am not sure the doctor, I mean my doctor, has actually asked me if I want it or not.” Individuals often recalled nurses and other ancillary staff recommending the vaccine, “but the doctor” only asked if they had it and “never specifically” if they wanted it.

Another trend was found in individuals who had a primary care provider in addition to a specialist. One individual recalled the recommendation of his diabetes doctor, while another, a recommendation by her husband’s doctor, and a third, recommended by his ear/nose and throat (ENT) doctor. It was reassuring to hear that individuals were also being asked about their vaccination status by providers other than their primary care team, but there was no follow through.

My ENT talked, asked me if I have ever had it but he didn't ask me if I wanted it.

I am sure I am supposed to ask my primary doctor but if no one offers or tells me I probably won't.

The lack of follow through led to a missed opportunity to vaccinate these individuals.

In summary, patients recall being asked about their vaccination status but did not recall their providers acting upon this information. These patients were not equating asking if they had already received the vaccine, and if not, as being an invitation to receive it that day at their appointment. They believed if their providers did not specifically offer the vaccine, this was a sign that they did not need the vaccine. In addition, although multiple providers seemed to be asking them about their vaccination status, the failure to offer the vaccine to them is leading to missed opportunities.

Theme Three: Future Likelihood to Action

The likelihood for a patient to get vaccinations is heavily rooted in not only their individual perceptions about the severity of an illness, but also in the way the vaccination is being presented. Many individuals just wanted their provider to tell them to get it, and they would have gotten their pneumonia vaccine. Others needed to see the benefit or the risk that pneumonia posed for them; in other words, they needed to have a change in their perceptions about the illness. Lastly, there were those individuals that no matter what the provider said or how they said it, and no matter what they knew about the disease, they did not see themselves as getting the vaccine.

Provider endorsement.

Patients look to their providers as a knowledgeable source for medical information. Individuals in this study often looked to their providers to help make

decisions about what health-related behaviors they were going to carry out. Individuals just wanted to be “told” to get their pneumococcal vaccine. One participant said, “The doctors just need to talk to me about it and I think I would get it.” Another one said, “... they just need to ask me so I remember that I need it.” Other common comments consisted of, “Yeah, if my doctor says I should I will,” “... if he thinks I should get it I will,” and “... if he told me I would.” One individual, again, expressed the importance of being told when she said, “I guess if my doctor told me I had to I would. Just no one tells me anything.” It also became clear that patients were still skeptical of their providers’ endorsement of the pneumococcal vaccine. One individual said, “... my doctor would have told me to get it,” while another said “... if he thinks I should get it I will but he probably doesn’t think it is important for me or he would have told me,” while yet another said, “If I should have had it, they would have given it to me, wouldn’t they?”

In summary, when asked if participants planned to get their pneumococcal vaccine in the future, their decision was dependent on their provider telling them to get the vaccine. However, participants remained skeptical that their providers would tell them to get the vaccine because they hadn’t done so yet.

When perceptions change.

The HBM stresses the effects that one’s individual perceptions have on their motivation to participate in a health-related activity (McEwen & Wills, 2007). Individuals did not feel that their perceptions, as to the seriousness of pneumonia, would change their beliefs. However, as time went, they thought their susceptibility might increase, which would prompt them to get the vaccine. Many individuals stressed that a change in their health, such as “diseases that put” them at increased risk might motivate them to get the vaccine. One participant further elaborated and said:

I don't think I will get it anytime soon. But I guess if I start getting sick, or um, if I get a disease that makes me more at risk, like heart disease or cancer, because it would make me more at risk for getting pneumonia because I wouldn't be able to fight it off as good. Maybe when I am in my 70s or 80s, maybe I would need it.

Only one participant recognized receiving new information, stating that if she "... got better information or something like why it makes a difference or that pneumonia would be really bad for (her)" and then she might get the vaccine. As mentioned earlier, only one individual realized that he was at an increased risk for pneumonia based on his current health status (diabetes), and he planned to talk to his provider about getting the vaccine.

In summary, few individuals felt that more information would help lead them to participating in vaccination. Rather, their age and health would lead to changes in their individual perceptions. It will continue to be important to offer individuals the vaccine, as there is no consensus as to what age or what disease would make the determining factor.

Not getting it.

As always, there are individuals that, despite the cues they receive, still will not get the vaccine. Many of these individuals did not believe in vaccines saying they actually "... make people sick."

My doctor has been asking me about that thing for over 10 years now and I just say nope every time. I don't like vaccines. They make people sick. And don't ask. I don't get that flu one a neither. Everyone I know who gets um just gets sick.

Other participants relied heavily on the fact that they “never” get sick. One participant said, “I am one of the healthiest old farts you will ever meet and I don’t get vaccines.”

When asked if there was anything that would prompt them to get the vaccine, the consistent answer was “nope.” One participant said it would not matter what the doctor said, he just didn’t “want it.” In fact, many individuals in this group were happy that their “doctor stopped asking” them because, “nothing” was “going to change” their minds. Lastly, one individual jokingly said in response, “I can’t think of anything that would make a difference. Unless you are giving me money (laughs).”

In summary, there are always going to be individuals who chose to disregard all cues to action. In addition, many of these participants appreciated the understanding their providers had for them, even though they no longer asked about receiving the pneumococcal vaccine. It is hard to predict the future, and although these participants may not foresee it, they may decide to receive the vaccine in the future. Therefore, it is important for provider’s to continue to offer the vaccine at each visit.

Discussion of Results with Related Studies

The process by which the elderly decide to refuse the pneumococcal vaccine can be complex. In this current study, understanding of one’s individual perceptions of susceptibility, seriousness, and cues to action assisted in the understanding of these older adult’s decision-making process and helped to clarify what, if anything, can be done in the future to change their decision to receive the vaccine. The results indicated that individuals who refused the pneumococcal vaccine viewed themselves as relatively healthy and, therefore, not susceptible. There were misconceptions as to the seriousness of pneumonia, but even those individuals who viewed it as a serious illness

thought that their good health would prevail. These individuals also strongly relied upon their providers' endorsement of the vaccine. The participants' perceptions at the time were to refuse the pneumonia vaccine, but stated their perceptions of susceptibility and seriousness could be changed if their providers told them that they should receive the pneumococcal vaccine

Numerous studies exist that looked at the barriers of adult vaccination (Nowalk et al, 2006; Winston et al., 2006; Yee et al, 2010; Zimmerman et al, 2009). Limited studies exist that focused solely on influenza vaccine (Payaprom et al. 2009; Telford & Rogers, 2003) and pneumococcal vaccine (Robke & Woods, 2010; Schuerer et al., 2007). Most of the studies available focused on the influences that affect an elder's decision to get either or both the influenza and pneumonia vaccine (Harris et al., 2006; Looijmans-van den Akker, et al, 2007; Madhavan et al, 2003; Pearson, Dube, Ford, & Mokdad, 2009; Raftopoulos, 2007; Santibanez et al, 2002).

Raftopoulos (2007) also conducted a qualitative study to explore the knowledge, attitudes, and beliefs towards the influenza and pneumococcal vaccine. Like this current study, Raftopoulos utilized the HBM as his framework. Unlike this study, the HBM was used to show the difference between those not immunized. Many factors had a synergic relationship with the final behavior of the elderly participants, but no factor had more influence than the physician's endorsement. Both studies found that a key influence on specific elderly behavior is the physician's recommendation. Furthermore, Raftopoulos found that individuals were not clear about their provider's position. These findings were also congruent with other studies (CDC, 1999a; Nowalk et al., 2004; Zimmerman et al., 2001), but none of these studies focused solely on the pneumococcal vaccine, and furthermore, no other study focused solely on the decision to refuse the vaccine.

Existing studies have investigated individuals' misconceptions as to the susceptibility of diseases, as well as the seriousness of the disease. Consistent with previous findings, individuals who have a misconception as to the seriousness of a disease are often those individuals who have not received a vaccination for this disease (Looijmans-van den Akker, 2002; Madhavan et al., 2003; Nowalk et al., 2006; Payaprom et al., 2009; Santibanez et al., 2002). Similar to these studies, this study found that changing one's perceptions about a disease may lead to altering their decision to be vaccinated. However, the hallmark finding in this study was the individuals' perceptions of the provider's endorsement of the vaccination.

Payaprom et al. (2009) conducted one of the most recent qualitative studies of this topic; although, their focus was on understanding the influenza vaccination decisions of Thai adults. In depth interviews of 20 adults, 65 years and older, who were eligible for the influenza vaccine were interviewed about their decision to accept or decline the vaccination. Similar to this study, Payaprom et al. demonstrated the complexity of the decision-making process to being vaccinated. Payaprom et al. found similar failed cues to actions when trying to understand influenza vaccinations in Thai adults. They also found participants' decisions were strongly influenced by family, peers, and healthcare providers. Unlike Payaprom et al.'s study, this study found that the provider's lack of endorsement, rather than peers, was most often used as the participants' reasons for declining the vaccine. The Payaprom et al. study focused solely on the influenza vaccine, as well as, cultural aspects.

Harris et al. (2006) performed a similar study to assess those barriers to both the pneumococcal and the influenza vaccine, as experienced by the Black elderly community. Like the current study, Harris et al. believed more qualitative research was

needed to further explore the decision-making process of the elderly, who refuse the pneumococcal vaccine. Unlike Harris et al, this study set forth to evaluate just those factors related to the decision process leading them to refuse the pneumococcal vaccine. Despite the difference in vaccination selection and the focus on race, both studies hoped results would help healthcare providers better understand their patients' beliefs about vaccinations.

In recent years, there have been only a few investigators who have focused their efforts on the pneumococcal vaccine. Jackson et al (2009) focused on the accuracy of vaccination records and the propensity for revaccination. Scheurer et al. (2007) and Robke and Woods (2010) focused their efforts on determining and overcoming the barriers inpatients experience in relationship to the pneumococcal vaccine. This study explored and describe the experience of refusing the pneumococcal vaccine in adults 65 years and older, and the factors that influenced them when making the decision. It is anticipated that the results of this study can contribute to further research in healthcare and will help providers (doctors, nurse practitioners, physician assistants) determine ways in which to reach those who have not been motivated to participate in receiving pneumonia vaccine as a means of health promotion.

Summary

The Health Belief Model provided a useful framework to guide this study, as well as to further explore and discuss the findings. In an attempt to explore and describe the experience of refusing the pneumococcal vaccine, interviews were conducted with adults 65 years and older ($n = 10$), who had been offered and refused the vaccine within the last year. The findings from this study revealed three major themes that were supported

with subthemes. The themes described the perceptions of the participants as they recalled those factors leading to their decision to refuse the pneumococcal vaccine. Findings were discussed and related to previous literature associated with adult influenza and pneumococcal vaccination.

By indentifying the factors associated with noncompliance of the pneumococcal vaccine, the APN can assess a client's vaccination status and practice strategies to promote compliance. The recognition of peoples' familial and personal experience is relevant when determining variables to vaccine acceptance. This philosophy is in keeping with the importance placed on patient-centered care and holistic care, which is rooted in nursing as good healthcare practice.

Chapter V

Summary, Conclusions, and Recommendations

Introduction

The purpose of this study was to explore and describe the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years and older. This chapter includes a brief summary of the perceptions described by 10 adults, 65 years and older, who had never received the pneumococcal vaccine and had refused it within the last year. Conclusions based on the results of this study are discussed. Implications for practice, education, and administration are included. Recommendations for further research and nursing education are also provided.

Summary of Findings

Studies indicate that the individual perceptions of elderly have a strong influence in their decision to refuse the pneumococcal vaccine. Numerous researchers looked at the barriers to getting adult vaccination (Nowalk et al, 2006; Winston et al., 2006; Yee et al, 2010; Zimmerman et al, 2009), factors associated with refusing the influenza vaccine (Payaprom et al. 2009; Telford & Rogers, 2003) and the pneumococcal vaccine (Robke & Woods, 2010; Schuerer et al., 2007). While the majority of the studies available focus on the influences that affect an elder's decision to get the influenza and pneumonia vaccine (Harris et al., 2006; Looijmans-van den Akker, et al, 2007; Madhavan et al, 2003; Pearson et al, 2009; Raftopoulos, 2007; Santibanez et al, 2002), the current study explored the perceptions of adults 65 years and older and those factors leading them to refuse the pneumococcal vaccine.

Participants described their experience and thoughts of refusing the pneumococcal vaccine. In addition, they were asked to reflect upon their susceptibility to pneumonia, as well as the seriousness of the disease. Participants felt that although they were not susceptible and that pneumonia would pose little to no serious problems for them, they did recognize that other individuals may have an increased susceptibility, and for those individuals, the seriousness of the disease would pose a greater threat. The major factor in both perceived susceptibility and seriousness was the individual's perception of their health. The healthier the individuals believed themselves to be, the less likely they felt that they were susceptible to the seriousness of the disease. They were also asked to reflect on why they refused the vaccine when it was offered. Individuals felt their providers were just asking because it was part of the assessment, but they did not really think the patients' really needed it. Others failed to recognize their provider's questions about vaccination as an endorsement or a recommendation to become vaccinated.

A qualitative descriptive approach was used to describe how adults 65 years and older perceived their experience of refusing the pneumococcal vaccine and the factors that may have influenced their decision. The target population for this study was elderly adults over the age of 65 from an adult aging and resource center, which had been offered. Elders who had refused the pneumococcal vaccine within the last year were chosen as participants for the study. A purposive, convenience sample of 10 participants was obtained from the ADRC, who met the criteria for sample selection and agreed to participate in the study.

A demographic questionnaire was used to gather background information. The researcher completed semi-structured interviews consisting of open-ended questions

reflecting the Health Belief Model. Questions focused on the individual's experience of refusing the pneumococcal vaccine, their perceived susceptibility for pneumonia, perceived seriousness of pneumonia, perceived barriers to vaccination, perceived benefits to vaccination, and cues to action.

Colaizzi's method was used to analyze data and to gain a feel for the entire experience (Speziale & Carpenter, 2007). Significant statements were extracted and restated in more general terms, followed by the formulation of meanings. Meanings were then organized into clusters of themes and subthemes, and then the researcher referred the themes back to the original transcript for their validation.

The theoretical framework chosen to guide this study was the Health Belief Model (HBM) (McEwen & Wills, 2007). The HBM helped guide this study by providing a clear picture of the fears people have for disease and how their health actions are motivated by the degree of the fear and the benefits they may obtain from their health actions. In addition, the HBM recognizes cues to action (TV, billboards, healthcare providers) that further motivate people to participate in health-promoting behaviors. Individuals make choices based on their perceived susceptibility to a disease, the perceived seriousness of the disease, and cues that would motivate them to action. In the current study, the concepts of the HBM were used to organize an interview guide, as well as, to reflect upon the responses of participants. All but one participant thought that their susceptibility to pneumonia to be relatively low due to their current healthy status. In addition, individuals believed that because they were in good health, pneumonia did not prove to be a substantial threat to them. They did acknowledge that they failed to recognize the cues to action their provider's presented and felt their providers did not really endorse getting the vaccine. Although they were asked about vaccination status,

the providers did not directly offer the vaccine, and the patients thought it was because their provider did not believe the vaccine was necessary. Results of the current study indicated that the participants' perceptions of the factors associated with refusing the pneumococcal could be improved by changing the way in which providers discussed vaccines, which might change the individual's perception of their susceptibility for pneumonia.

Theme One: Individual perceptions.

Two subthemes emerged from this theme. In the first subtheme of *susceptibility* participants discussed their beliefs about the likelihood of contracting pneumonia. A common perception was that their current healthy status gave them an advantage. They compared themselves to other individuals with co-morbidities, such as diabetes, heart disease, and cancer, and stated how the addition of these co-morbidities makes others more susceptible to pneumonia. In the subtheme *seriousness*, participants said they did not know a lot about pneumonia and how serious it really was. Individual's thoughts ranged on a continuum from it being like a cold to its ability to cause death. However, all individuals felt that their susceptibility was directly related to how severe their symptoms would be if they contracted it. They believed that those individuals who had low susceptibility would experience the lesser of the symptoms, while those individuals with increased susceptibility would experience the more serious symptoms.

Theme Two: Failed cues to action.

Both of the subthemes within theme two reflect the participants' views of their providers' failures to cue them to action. In the first subtheme of *provider endorsement* participants discussed their providers failed cues to action. Participants felt their providers were just asking about the pneumococcal vaccine as a part of their job, but

didn't believe they really needed to get them. Participants believed their providers' lack of encouragement to get the vaccine meant it wasn't really necessary. In the subtheme *asked but not offered*, participants further stressed their perception that providers just were asking about vaccination status, but that they weren't offering the vaccination. Individuals felt the lack of follow through reflected their provider's belief that they did not need the vaccine.

Theme Three: Future likelihood to action.

The first subtheme, *provider endorsement*, again shows how important individuals view their provider's stance on the pneumococcal vaccine. A vast majority of the individuals felt that if their providers had told them to get the vaccine, they would. The second subtheme, *change in perceptions*, reflects the importance of individual perceptions as to their susceptibility to and the seriousness of contracting pneumonia. Interestingly enough, participants did have a change in perception of getting the vaccine, not only related to their provider's encouragement, but also based on their potential future changes in health status, as well as their increasing age. The third subtheme, *not getting it* reflects the beliefs of those individuals who felt the benefits of the vaccine would never outweigh their barriers.

Conclusion

All participants in the current study had perceived that their susceptibility to and seriousness of pneumonia to be low based on their current health status. There were common failed cues to action that were given to them by their providers. The way the topic of the pneumococcal vaccine was presented was perceived as an unnecessary health need. The patients did not understand that the provider was endorsing it for

them, which led participants to acknowledge that if this cue to action had not failed, many would have received the pneumococcal vaccine. Other individuals reflected upon their perceptions of susceptibility and seriousness to the disease, stating that as their health changed and age changed, they might begin to believe that the benefits outweigh the risk. Others could not see this happening. The following are conclusions from this study:

1. Refusal of the pneumococcal vaccine is strongly related to how patients perceive their provider's endorsement of the vaccine.
2. Refusal of the pneumococcal vaccine is related to the patient's belief as to their susceptibility to and seriousness of pneumonia.
3. Patients want their doctors to tell them to get the vaccine.
4. Regardless of perceived susceptibility, perceived severity, cues to action, and perceived benefits, some patients will still refuse the vaccine.

Implications

Nursing practice.

This study can be used to enlighten others working with the elderly population who are unaware of the factors that may prevent elderly from participating in health promoting activities like vaccinations. Too often, the pneumococcal vaccination is overshadowed by the influenza vaccine. Most studies focusing on the elderly and their compliance with vaccination have been done in relation to the influenza vaccine and those factors that lead individuals to be vaccinated rather than what prevents them from being vaccinated.

Health promotion is a basic function of nursing and is applicable to enhancing the acceptance of vaccinations. Nurse practitioners are in the unique position to promote proper vaccination in the elderly. Through a leadership role, advanced practice nurses (APNs) are able to promote optimum life-styles by fostering positive health practices. By identifying the variables of health promotion, the APN can assess the clients' status and practice strategies to promote compliance. This philosophy is in keeping with the importance placed on patient-centered and holistic care, which is rooted in nursing as good healthcare practice. There are numerous conceptual frameworks, like the HBM, that can be used by clinicians in designing messages and programs that effectively influence individual decisions about health behaviors, such as being vaccinated.

The role of the APN in increasing pneumococcal awareness will need to be based on the best evidence in the treatment and prevention of pneumonia and its complications. The APN's role as educator and healthcare policy advocate is essential for making the changes needed to improve compliance and increase awareness. The APN will need to encourage the elderly to receive the pneumococcal vaccine by questioning their beliefs, attitudes, and perceptions of pneumonia; the vaccine itself; and their ability to get a vaccination. Negative perceptions and lack of knowledge about pneumonia and the vaccine should be addressed. For example, APNs may increase vaccine acceptance by (a) informing clients that there can be serious pneumonia complications for them or people they are exposed to, (b) that the vaccine is effective, and (c) that people cannot get pneumonia from the vaccine.

Recommendations

This study provided a snapshot of the perceptions of adults 65 years and older, as they reflected upon their refusal to obtain the pneumococcal vaccine. A compelling finding was that for many participants, regardless of their perception of susceptibility or seriousness of pneumonia, a perception that their providers endorsed the pneumococcal vaccine would have led to compliance with vaccine recommendations. Because limited studies exist regarding the pneumococcal vaccine and those factors that influence the elderly to decline the vaccine, recommendations for future research include the following:

1. A replication with a larger sample would provide a better understanding as to what factors influence individuals when making decisions to refuse the pneumococcal vaccine.
2. A comparative study of those factors that influence refusal of the vaccine versus those factors that promote acceptance of the vaccine to increase compliance in all areas of healthcare.
3. Studies focusing on reasons persons under the age of 65 years have refused, and whom the Advisory Committee on Immunization Practices has designated as needing the vaccine, in order to further increase the compliance of the vaccine.
4. An exploratory study of individuals who have refused the pneumococcal vaccine in the past, who are not vaccinated according to pneumococcal vaccination recommendations.

Summary

A summary of the study and findings are included in this chapter. Based on the results of this current study and previously cited research, individual perception of the susceptibility and seriousness of a disease strongly reflects one's current vaccination status. Participants in this study soon realized that their providers' attempts to cue them to obtaining the pneumococcal vaccine had failed, since they perceived that the provider did not truly endorse the vaccination. They thought that rather than offering them the vaccine, they were only asked about their vaccination status. In looking towards their future with the vaccination, many individuals felt changes in their perceptions of health status and advancing age would lead to getting the vaccination, while others felt that the benefits of getting the pneumococcal vaccination would not overcome the barriers that they already had in place. By understanding the perceptions of the elderly on refusing the pneumococcal vaccine, nurses, APNs, and other healthcare providers will have the opportunity to increase the older adult's compliance with getting the vaccine. Recommendations were presented for future research.

APPENDIX A
DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNAIRE

Please complete the following information to the best of your ability.

- 1) How old were you in 2010?
 - a. 65-69
 - b. 70-74
 - c. 75-79
 - d. 80-84
 - e. 85-89
 - f. 90-94
 - g. 95-99
 - h. 100 or older
- 2) Gender
 - a. Male
 - b. Female
- 3) Marital Status
 - a. Single
 - b. Married
 - c. Divorced
 - d. Separated
 - e. Widowed
- 4) Highest level of education
 - a. No formal education
 - b. Grade school
 - c. Some high school
 - d. High school diploma
 - e. Some college or technical school
 - f. Graduated from college or technical school
- 5) Your approximate household income?
 - a. Less than 10,000
 - b. \$10,000 to 19,999
 - c. \$20,000 to 29,999
 - d. Over 30,000

- 6) Do you have a primary care provider?
- a. Yes
 - b. No
- 7) How often do you see your primary care provider in a year?
- a. 0-1
 - b. 2-3
 - c. 4-5
 - d. More than 5
- 8) Did you receive the influenza vaccine in 2010 or 2011?
- a. Yes
 - b. No
 - c. Not sure

APPENDIX B
INTERVIEW GUIDE

INTERVIEW GUIDE

Please describe your experience of being offered the pneumococcal vaccine.

Perceived Susceptibility

1. How susceptible do you think you are to pneumonia?
 - a. Are some people more susceptible to pneumonia and if so why?
 - b. Is the impact of pneumonia more serious to those who are more susceptible?

Perceived Severity

2. How serious do you consider pneumonia?
 - a. If you were to get pneumonia what are the difficulties, if any, that pneumonia would create for you?

Perceived Benefits

3. To whom is the pneumonia vaccine most beneficial and why?

Perceived Barriers

4. Explain to me who offered you the pneumonia vaccine and why you chose not to get it?
 - a. Have you been offered the vaccine before?
 - i. If so by whom and was your reason for refusing the same as it is now?

Cues to Action

5. Who or what has prompted you to get the pneumonia vaccine or would prompt you to get the vaccine? (TV, billboard, MD, nurse, etc.)?
 - a. Describe how you felt when you received the information?
 - b. Explain why the information did not prompt you to obtain the pneumonia vaccine?

Potential for Susceptibility

6. Do you plan to get the pneumococcal vaccine in the future and if so what will prompt you to make this decision?

APPENDIX C

UW OSHKOSH IRB APPROVAL LETTER



December 3, 2010

Ms. Kristin Collar
2783 Rockwood Heights
Green Bay, WI 54313

Dear Ms. Collar:

On behalf of the UW Oshkosh Institutional Review Board for Protection of Human Participants (IRB), I am pleased to inform you that your application has been approved for the following research: No Intention to Comply with the Pneumococcal Vaccination: In the Elderly.

Your research has been categorized as NON-EXEMPT, which means it is subject to compliance with federal regulations and University policy regarding the use of human participants as described in the IRB application material. Your protocol is approved for a period of 12 months from the date of this letter. A new application must be submitted to continue this research beyond the period of approval. In addition, you must retain all records relating to this research for at least three years after the project's completion.

Please note that it is the principal investigator's responsibility to promptly report to the IRB Committee any changes in the research project, whether these changes occur prior to undertaking, or during the research. In addition, if harm or discomfort to anyone becomes apparent during the research, the principal investigator must contact the IRB Committee Chairperson. Harm or discomfort includes, but is not limited to, adverse reactions to psychology experiments, biologics, radioisotopes, labeled drugs, or to medical or other devices used. Please contact me if you have any questions (PH# 920/424-7172 or e-mail: rauscher@uwosh.edu).

Sincerely,

Dr. Frances Rauscher
IRB Chair

cc: Dr. Vicki Moss
1924

INSTITUTIONAL REVIEW BOARD
UNIVERSITY OF WISCONSIN OSHKOSH • 800 ALGOMA BLVD • OSHKOSH WI 54901
(920) 424-3215 • FAX (920) 424-3221

An Equal Opportunity/Affirmative Action Institution • <http://www.uwosh.edu/>

APPENDIX D
PERMISSION FROM ADRC TO SAMPLE



"Building a community that values, empowers and supports seniors, adults with disabilities and their caregivers"

February 27, 2011

To: UW-Oshkosh

Re: Kristin Collar, UW-O nursing student who is working on her Master's Thesis

We were contacted by Kristen who would like to come to the ADRC to find persons age 65+ that fit the criteria for her study to do a 10-15 minute tape-recorded interview with them related to the Pneumonia Vaccine. We are very willing to support this. Kristin and I have talked on the telephone, and we will determine a time or times that would be best for her to come in to meet her timeline.

If you have any questions, please call me Tuesday – Friday at 920-448-4309.

Snooky Zuidmulder

Snooky Zuidmulder, ADDLife Center Program Coordinator

Sunny Archambault, Director
300 South Adams Street, Green Bay, WI 54301 • (920) 448-4300
TTY: (920) 448-4335, Fax: (920) 448-4306
BC_Aging_Disability_Resource_Center@co.brown.wi.us



APPENDIX E
INTRODUCTION LETTER

University of Wisconsin Oshkosh

Research Study

I, Kristin Collar am a graduate student from the University of Wisconsin Oshkosh seeking a Masters of Science in nursing. I am conducting a study to explore and describe the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years and older. I am currently seeking participants for my study. The following are criteria for participation in the study:

5. The participants will be able to read, write, and speak the English language fluently.
6. The participants will have never had the pneumococcal vaccine.
7. The participants will have been offered a pneumococcal vaccine within the last year.
8. The participants will have refused the pneumococcal vaccine.
9. The participants will have been 65 years or older at the time of the refusal.

If you are interested in participating and fulfill these criteria and we can set up a time for interview now. If at a later time, you become interested in participating please feel free to contact me.

Contact Number: (920) 265-1169

This contact number is completely confidential and only I, the researcher, has access to the voicemail information.

APPENDIX F
INFORMED CONSENT

University of Wisconsin Oshkosh

Informed Consent

I, Kristin Collar, graduate nurse practitioner student, in the College of Nursing at the University of Wisconsin will be conducting a study on the experience of refusing the pneumococcal vaccine from the perspective of adults 65 years and older. I would appreciate your participation in the study as it will assist me as a health care provider in understanding your choice to abstain from the pneumococcal vaccine.

As part of the study, I will be talking with you at a place of your choice. I will be conducting an interview and you will need to fill out a short questionnaire. The interview may last approximately one hour. The questionnaire may take approximately 5-10 minutes.

My study will not interfere with the treatment you receive from your provider. In addition, I do not anticipate that the study will present any medical or social risk to you other than the inconvenience of the time required for the interview and the questionnaire. Participation in the study may not benefit you directly.

The information I gather through interview and questionnaires will be recorded in anonymous form. I will not release information about you to your doctor or to anyone else in a way that could identify you. If in the future there are any presentations or publications regarding this study, all personal data is removed therefore leaving no identifiable information.

If you want to withdraw from the study at anytime, you may without penalty. The information collected from you up to that point would be destroyed if you desire. Once the study is completed, I would be glad to give the results to you. In the meantime, if you have questions, please ask me.

If you have, questions about your treatment as a participant in this study please call or write:

Chair, IRB for Protection of Human Participants

C/O Grants Office

University Wisconsin Oshkosh

Oshkosh, WI 54901

(920) 424-1415

Although the chairperson may ask your name, all complaints are kept in confidence.

Please sign your name in the place provided below.

I have received an explanation of this study and agree to participate. I understand that participation in this study is strictly voluntary.

Name

Date

I agree to be audio taped.

Name

Date

REFERENCES

- Administration on Aging. (2010). *Census data & population data*. Retrieved from http://www.aoa.gov/AoARoot/Aging_Statistics/Census_Population/Index.aspx
- Centers for Disease Control and Prevention. (1997). Prevention of pneumococcal disease: Recommendation of the Advisory Committee on Immunization Practices (ACIP). *Morbidity and Mortality Weekly Report*, 46 (RR-81): 1-24.
- Centers for Disease Control and Prevention. (1999a). Reasons reported by Medicare beneficiaries for not receiving influenza and pneumococcal vaccinations – United States, 1996. *Morbidity and Mortality Weekly Report*, 48, 886-890. Retrieved from <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4839a4.htm>
- Centers for Disease Control and Prevention. (1999b). Vaccine preventable diseases, improving vaccination coverage in children, adolescents, and adults. A report on recommendations of the task force on community preventive services. *Morbidity and Mortality Weekly Report*, 48 (RR-8), 1-15.
- Centers for Disease Control and Prevention. (2010). *Pneumonia fastats – United States, 2010*. Retrieved from <http://www.cdc.gov/nchs/fastats/pneumonia.htm>.
- Dexter, P., Perkins, S., Maharry, K., Jones, K., & McDonald, C. (2004). Inpatient computer-based standing orders vs. physician reminders to increase influenza and pneumococcal vaccination rates. *Journal of American Medical Academy* 292, 2366-2371.
- Fedson, D. (1999). Pneumococcal vaccination for older adults: The first 20 years. *Drugs & Aging*, 15(1), 21-30. Retrieved from CINAHL Plus with Full Text database.

- Harris, L. M., Chin, N. P., Tincella, K., & Humiston, S. (2006). Barrier to pneumococcal and influenza vaccinations in black elderly communities: Mistrust. *Journal of the National Medical Association, 98*(10), 1678-1684. Retrieved from CINAHL Plus with Full Text database.
- Jackson, L. A., Baxter, R., Naleway, A. L., Belongia, E. A., & Baggs, J. (2009). Patterns of pneumococcal vaccination and revaccination in elderly and non-elderly adults. *BMC Infectious Diseases, 9*(37). doi:10.1186/1471-2334-9-37
- Looijmans-Van Den Akker, I., Van Den Heuvel, P. M., Verheij, T. M., Van Delden, J. M., Van Essen, G. A., & Hak, E. (2007). No intention to comply with influenza and pneumococcal vaccination: Behavioral determinants amongst smokers and non-smokers. *Preventive Medicine, 45*, 380-385. doi:10.1016/j.pymed.2007.07.009.
- Madhavan, S., Borker, R., Fernandes, A., Amonkar, M., & Rosenbluth, S. (2003). Assessing predictors of influenza and pneumonia vaccination in rural senior adults. *Journal of Health & Social Policy, 18*(2), 71-93. Retrieved from MEDLINE with Full Text database.
- Mayo, A. M., & Cobler, S. (2004). Flu vaccines and patient decision-making: What we need to know [Electronic version]. *Journal of the American Academy of Nurse Practitioners, 16*(9), 402-410.
- McEwen, M., & Wills, E. M. (2007). *Theoretical basis for nursing* (2nd ed., pp. 317-321). Philadelphia: Lippincott Williams & Wilkins.
- Nowalk, M. P., Zimmerman, R. K., Shen, S., Jewell, I. K. & Raymund, M. (2004), Barriers to Pneumococcal and Influenza Vaccination in Older Community-Dwelling Adults (2000–2001). *Journal of the American Geriatrics Society, 52*, 25–30. doi: 10.1111/j.1532-5415.2004.52006.x

- Nowalk, M., Zimmerman, R., Tabbarah, M., Raymund, M., & Jewell, I. (2006).
Determinants of adult vaccination at inner-city health centers: a descriptive study.
BMC Family Practice, 72. Retrieved from MEDLINE with Full Text database.
- Payaprom, Y., Bennett, P., Burnard, P., Alabaster, E., & Tantipong, H. (2009).
Understandings of influenza and influenza vaccination among high-risk urban
dwelling Thai adults. *Journal of Public Health*, 32(1), 26-31. doi:10.1093/pub
med/fdp086
- Pearson, W. S., Dube, S. R., Ford, E. S., & Mokdad, A. H. (2009). Influenza and
pneumococcal vaccination rates among smokers: Data from 2006 Behavioral
Risk Factor Surveillance System. *Journal of Preventative Medicine*, 48, 180-183.
doi:10.1016/j.ypmed.2008.11.001
- Raftopoulos, V. (2007). Beliefs, knowledge and attitudes of community-dwelling Greek
elders towards influenza and pneumococcal vaccination. *Internet Journal of
Epidemiology*, 4(1). Retrieved from CINAHL Plus with Full Text database.
- Robke, J. T., & Woods, M. (2010). A decade of experience with an inpatient
pneumococcal vaccination program. *American Journal of Health Systems
Pharmacists*, 67. doi:10.2146/ajhp080638
- Santibanez, T., Nowalk, M., Zimmerman, R., Jewell, I., Bardella, I., Wilson, S., & Terry,
M. (2002). Knowledge and beliefs about influenza, pneumococcal disease, and
immunizations among older people. *Journal of the American Geriatrics Society*,
50(10), 1711-1716. Retrieved from CINAHL Plus with Full Text database.
- Scheurer, D. B., Cawley, P. J., Brown, S. B., & Heffner, J. E. (2006). Overcoming
barriers to pneumococcal vaccination in patients with pneumonia. *American
Journal of Medical Quality*, 21(1), 18-29. doi:10.1177/1062860605280314

- Sidhu, A. K., Yen, C. B., Tyng, F. K., Osman, N. B., Emily, P. W., & Kate, W. Y. (2007). Polypharmacy and the elderly: A review of literature. *Singapore Nursing Journal*, 34(4), 11-20.
- Silverman, M., Terry, M. A., Zimmerman, K., Nutini, J. F., & Ricci, E. M. (2002). The role of qualitative methods of investigating barriers to adult immunization. *Qualitative Health Research*, 12, 1058-1075. doi:10.1177/104973202129120449
- Speziale, H. J., & Carpenter, D. R. (2007). *Qualitative research in nursing: Advancing the humanistic imperative* (4th ed.). Philadelphia: J. B. Lippincott.
- Stange, K. C., Flocke, S. A., & Goodwin M. A. (1998). Opportunistic preventative services delivery. Are time limitations and patient satisfaction barriers? *Journal of Family Practice*, 46(5), 419-424.
- Telford, R., & Rogers, A. (2003). What influences elderly peoples' decisions about whether to accept the influenza vaccination? A qualitative study. *Health Education Research: Theory and Practice*, 18(6), 743-753. doi:10.1093/her/cyf059
- U.S. Department of Health and Human Services (2001). *Healthy people 2010: Understanding and improving health*. Retrieved from <http://www.healthypeople.gov/2010/>
- U.S. Department of Health and Human Services (2010). *Healthy people 2020: The road ahead*. Retrieved from <http://www.healthypeople.gov/2020/default.aspx>
- Winston, C. A., Pascale, M., Wortley, P. M., & Lees, K. A. (2006). Factors associated with vaccination of Medicare beneficiaries in five U.S. communities: Results from the racial and ethnic adult disparities in immunization survey, 2003. *Journal of American Geriatrics*, 54(2), 303-310. doi:10.1111/j.1532-5415.2005.00585.x

- Yee, S. S., Dutta, P. R., Solin, L. J., Vapiwala, N., & Kao, G. D. (2010). Lack of compliance with national vaccination guidelines in oncology patients receiving radiation therapy. *The Journal of Supportive Oncology*, 8(1), 34. Retrieved from CINAHL Plus with Full Text database.
- Zimmerman, R., Nowalk, M., Tabbarah, M., Hart, J., Fox, D., & Raymund, M. (2009). Understanding adult vaccination in urban, lower-socioeconomic settings: influence of physician and prevention systems. *Annals of Family Medicine*, 7(6), 534-541. Retrieved from CINAHL Plus with Full Text database.
- Zimmerman, R., Silverman, M., Janosky, J., Mieczkowski, T., Wilson, S., Bardella, I. ... Nowalk, M. (2001). A comprehensive investigation of barriers to adult immunization: A methods paper. *The Journal of Family Practice*, 50(8), 703. Retrieved from MEDLINE with Full Text database.