

ABSTRACT

WHAT ARE PARENTS' PERCEPTIONS OF THE HPV VACCINE FOR THEIR ADOLESCENT SONS?

By Emily M. Weiss

Human Papillomavirus (HPV) is a sexually transmitted infection that can cause cervical, penile, anal, and oral cancer when left untreated. Each year approximately 6.2 million individuals are affected with HPV (U. S. Department of Health and Human Services Centers for Disease Control and Prevention, 2006). Half of the new cases reported every year are in adolescents and young adults, ages 15 to 24 years. In 2006, the HPV vaccine was released for use in women ages 9 to 26 years. Since 2009, the same vaccine given to young women has been available for boys and young men ages 9 to 26 years. Currently the research that has been done is of parents' perceptions of the HPV vaccine for their adolescent daughters. Research is lacking on how parents perceive this same vaccine for their adolescent sons. The research question examined was: What are parents' perceptions of the HPV vaccine for their adolescent son?

The purpose of this study was to examine the perceptions parents hold regarding the HPV vaccine for their adolescent son. The setting is in a Midwestern community. The theoretical framework is the Health Belief Model. The study design is a phenomenological qualitative design. Parents were interviewed after being chosen using a snowball technique. The interviews were conducted with data saturation met after 8 interviews. Data was analyzed using Giorgi's method (Streubert Speziale and Carpenter, 2007). In conclusion, education needs to be developed for parents to make an informed decision about vaccinating their sons against HPV.

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THEIR ADOLESCENT SONS?

by

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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

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4/12/2011

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Chapter I

Introduction

Adolescent males are posed with many challenges as they make the transition into adulthood. Those challenges include substance abuse, unintentional injuries, violence, poor school performance, and sexually transmitted disease. Human papillomavirus (HPV) is the most common sexually transmitted infection in today's culture (U. S. Department of Health and Human Services Centers for Disease Control and Prevention [CDC], 2006). According to the CDC (2006), approximately 20 million Americans are currently affected with HPV, with an additional 6.2 million people newly affected each year, half of which are adolescents and young adults between the ages of 15 and 24 years.

Most people who contract HPV are not aware they have contracted the virus because they have not developed genital warts, do not have an abnormal Papanicolaou (PAP) smear, or exhibit any other signs or symptoms (Leaver & Labonte, 2010). Genotype is described as the genetic make-up of a certain organism or disease. Human papillomavirus has many genotypes, but genotypes 6, 11, 16, and 18 cause 70% to 80% of all cervical, vulvar, and vaginal cancers and 90% of genital warts (Leaver & Labonte, 2010, p. 32). Human papillomavirus is also associated with different types of male cancers, such as anal, penile, and oropharyngeal and oral cavity cancers (Morbidity and Mortality Weekly Report [MMWR], 2010). Gardasil®, the first HPV vaccine to be approved for the market in the United States, has been proven to protect against these four genotypes of HPV and was initially released for females ages 9 to 26. Starting in October 2009, the Gardasil® vaccine is now approved through the Food and Drug

Administration for males ages 9 to 26 years (MMWR, 2010). A trial of 4,065 males, ages 16 to 26 years was done to show efficacy and immunogenicity of the vaccine in the male population. Similar common adverse events, such as injection site pain, fever, and fainting, were shown to be the same in the males as in the females (MMWR, 2010). Vaccinating males is an important step in decreasing the rates of HPV, genital warts, and cancers associated with the different genotypes that Gardasil® will protect against.

The American Cancer Society (2010) estimates 12,200 new cases of cervical cancer will be reported in 2010, and 4,210 cases of death from cervical cancer were estimated in 2010 (p.4). Although the HPV vaccine was released in the United States in 2006, cases of cervical cancer have increased. This increase could be from better diagnostic tests and awareness in HPV screening. In 2006, 9,710 new cases of cervical cancer were reported by the American Cancer Society (2006) and 3,700 reported deaths occurred.

In regards to the HPV vaccine, the research done is solely focused on parents' perceptions of the HPV vaccine in their adolescent daughters. Since this vaccine was just released for male use in 2009, there is a lack of research in the literature regarding what parents think about vaccinating their sons. Vaccinating males at an early age will decrease the rates of HPV exposure and transmission among women and men.

Problem Statement

Human papillomavirus is the most common sexually transmitted infection in the United States today (CDC, 2006). Education on the HPV vaccine is needed in order to decrease the number of HPV cases in the United States. Parents must understand the importance of this vaccine for their sons in order to make the best decision. If a health

care provider knew and understood the perceptions that parents have, then education could be tailored to parents that are still unsure of what the ramifications are of acquiring HPV and what the HPV vaccine can do for their sons.

The conceptual framework for this study is the Health Belief Model (HBM) developed by Becker in the 1960's (Pender, Murdaugh, and Parsons, 2006, p. 38). According to Pender et al. (2006), "The Health Belief Model (HBM) was proposed in the 1960s as a framework for exploring why some people who are illness-free take actions to avoid illness, whereas others fail to take preventive actions" (p. 38). The pending threat of illness in this study is the human papillomavirus.

Significance to Primary Health Care Nursing

Evidence based practice is based on results from clinically relevant research, clinical expertise/expert opinion, and patient preferences. In studying parents' perceptions of the HPV vaccine, a primary health care provider will be able to understand why a parent chooses to vaccinate or not vaccinate their child. With this information, education can be based on the results and shared with parents prior to making the decision to vaccinate.

Reasons why parents are declining the vaccine are important aspects that can come from this research. Education can be provided to the parents and adolescents about side effects, sexually transmitted infections, and cervical cancer. As Brewer and Fazekas (2007) reported in their research;

However, the reviewed findings, taken in combination with well-known health behavior theories and the body of empirical literature on vaccination and related interventions, suggest that HPV vaccine programs in the United States should

emphasize the high likelihood of HPV infection, high vaccine effectiveness, and physician's recommendations, and address barriers to vaccination. Because of the potential for misunderstanding, campaigns may need to take care to communicate that the HPV vaccines provide less than total protection against cervical cancer (p. 113).

Using the perceptions that are produced from the interviews in this research, a health care provider will be able to focus on the common misconceptions that are linked with the HPV vaccine.

Purpose of the Study

The purpose of this study is to identify perceptions towards the acceptability of the HPV vaccine among parents and whether they will consent to vaccinate their adolescent son. The reasons a parent decides to vaccinate or not vaccinate their son against the most common strains of HPV are explored in this research.

Research Question

The research question for this study is: What are parents' perceptions of the HPV vaccine for their adolescent son? Through a qualitative research design, interviews were done in order to obtain the perceptions of the parents on the HPV vaccine. The same questions were used in all the interviews and were: (a) Please describe your beliefs and opinions about vaccinations; (b) What is your experience in vaccinating your son?; (c) Where do you get information about vaccinations that you consider the most trustworthy?; (d) What have you heard about the HPV vaccine?; (e) What are your

thoughts about the HPV vaccine?; and (f) What are the factors that are driving your decision about administration of the HPV vaccine?

Definition of Terms

Conceptual Definitions

Parent – One that begets or brings forth offspring, a person who brings up and cares for another (Merriam-Webster, 2010).

Perception – A result of perceiving, a mental image (Merriam-Webster, 2010).

Adolescent male – The period in the life of a male when the onset of physical and psychological development has begun but not reached full maturity; a teenager (Pickett, 1998).

Operational Terms

Parents – For the purpose of this study, parents are defined as married or unmarried, male or female individuals with a son.

Adolescent – For the purpose of this study, adolescent is defined as unmarried, male individual in the age group 9 to 15 years.

Perception – For the purpose of this study, perception is defined as parents' thoughts and beliefs on the HPV vaccine for their adolescent son.

The instrument used to obtain the research was an interview between the participant and the researcher. All of the participants were interviewed with the same bank of questions predetermined by the researcher. All interviews were audio taped and then transcribed.

Assumptions

1. Parents will be willing to answer questions about their vaccination beliefs.
2. Parents will have different levels of knowledge of the HPV vaccine.
3. Parents will have the same perceptions of the HPV vaccine for all of their children.

Summary

The significance of HPV in the United States has been well documented (CDC, 2006). Studies have shown that HPV is the most common sexually transmitted infection in the United States (MMWR, 2010). Parents' perceptions of the HPV vaccine in their adolescent sons have not been well documented in the United States. There have been numerous qualitative and quantitative studies that have shown acceptability of the vaccine and vaccination rates in adolescent females. With the parents' perceptions researched, primary care providers will be able to understand what is preventing or encouraging parents from vaccinating their sons against this common sexually transmitted infection.

Chapter II

Theoretical Framework and Literature Review

Introduction

The theoretical framework utilized in this study and review of literature is provided in this chapter. Extensive research into parents', specifically mothers', perceptions and beliefs about the HPV vaccine in their adolescent daughters was found in the literature, along with information about adolescents' beliefs or perceptions of the HPV vaccine. There is no literature or research found on the perceptions or beliefs of parents regarding the HPV vaccine in their adolescent sons. This research will identify the perceptions behind vaccinating for HPV in male adolescents, providing primary care givers better knowledge to construct modalities to increase the uptake of the HPV vaccine in their clinics.

Theoretical Framework

This study is based on Becker's Health Belief Model (HBM) (1974) – "The HBM is derived from cognitive theory, primarily the work of Lewin" (Pender et al., 2006, p. 38). Since 1974, the HBM has been expanded and developed into six main constructs, which include (a) perceived susceptibility, (b) perceived severity, (c) perceived benefits, (d) perceived barriers, (e) cue to action, and (f) self-efficacy (National Cancer Institute, 2005, p. 12). Figure 1 depicts a visual mapping of the theory (Pender et al., 2006, p. 39).

The first construct, perceived susceptibility, is an individual's view of the chance of contracting the condition. For the purpose of this study, these are the views of the

parents regarding their son contracting HPV in the future. The second construct, perceived severity of the threatening condition, is the individual's view of the severity of the perceived threat. The third construct is the benefits perceived by the individual or the effectiveness of some advised action to reduce the risk or seriousness of the impact. The fourth construct is the perceived barriers or the person's opinion of the actual and psychological cost of the advised action. The fifth construct, cue to action, is if the individual is exposed to factors that prompt action will the advised action be completed. The sixth construct, self-efficacy, involves the individual having confidence in their ability to successfully perform an action (National Cancer Institute, 2005, p. 13). For the purpose of this study, the parent's ability to vaccinate their son against HPV would be the self-efficacy role of this theory.

The HBM is useful for practitioners in planning health programs. "Practitioners should ground their efforts in an understanding of how susceptible the target population feels to the health problem, whether they believe it is serious, and whether they believe action can reduce the threat at an acceptable cost" (National Cancer Institute, 2005, p. 13). The aim in this research study is to ascertain the perceptions of parents about the HPV threat in their adolescent son and the use of the HPV vaccine to prevent this sexually transmitted infection.

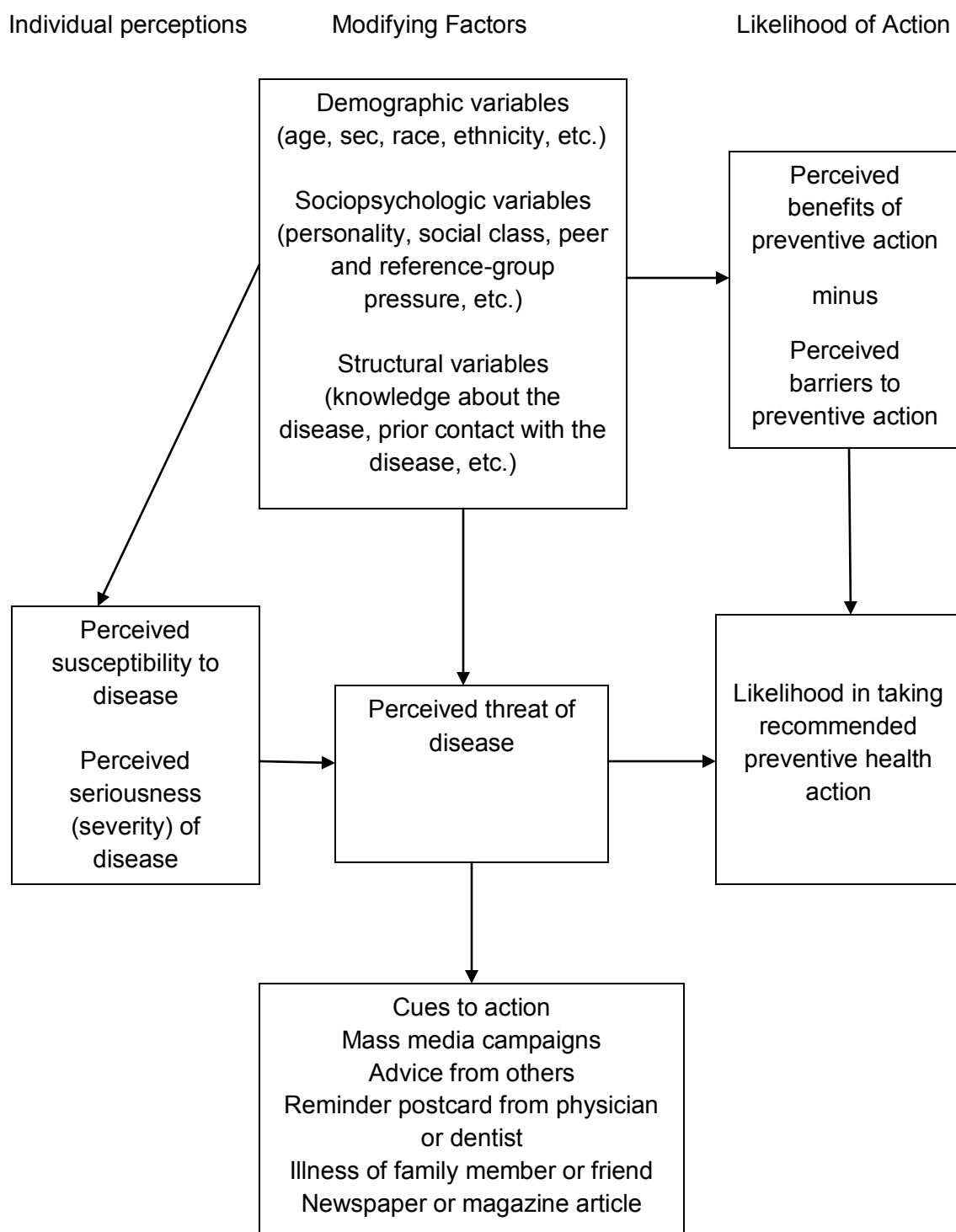


Figure 1. Health Belief Model (Pender et al., 2006).

Literature Review

Parents' perceptions, specifically mothers' perceptions, of the HPV vaccine for their adolescent daughters have been studied extensively through quantitative and qualitative research. There were research studies found by this researcher into what a parent's knowledge, perceptions, or beliefs are with regards to the HPV vaccine in their adolescent daughter. With the previous research of parents' perceptions and knowledge of the vaccine for the daughter, it is easy to hypothesize that the vaccine may be accepted for their son as well.

Parents' perceptions with regards to their daughters. In a research study done by Reiter, Brewer, Gottlieb, McRee, and Smith (2009), 889 parents of adolescent girls ages 10 to 18 years were studied to examine the health beliefs and HPV vaccine acceptability. The researchers reported that the parents who perceived higher levels of vaccine effectiveness and had a doctor's recommendation to get their daughters vaccinated, were more likely to report vaccine initiation (Reiter et al., 2009). There were few limitations to this research in that only parents who spoke English and had a telephone were interviewed. Researchers were unable to find correlates of completing the HPV vaccine series because few female adolescents had received all three doses (Reiter et al., 2009). The researchers concluded that parents' beliefs about the HPV vaccine are important in the vaccination of their daughters (Reiter et al., 2009).

In a study done by Waller, Marlow, and Wardle (2006), mothers' attitudes were examined towards the HPV vaccine in preventing cervical cancer. This was a small qualitative study with 24 participants in four small focus groups. The groups participated in a 60-minute discussion group talking about their feelings and experiences of vaccination, views on a hypothetical cancer vaccine, and views on hypothetical sexually

transmitted infection vaccines (Waller et al., 2006). At the conclusion of this study, the researchers believed that parental acceptance was crucial for ensuring high uptake of the HPV vaccine (Waller et al., 2006). The study also indicated that although the attitudes toward HPV vaccine were positive, the age at which the vaccine is administered is a contentious issue and that some parents had concerns with encouraging risky sexual behavior (Waller et al., 2006).

A parent perceiving that their daughter will engage in risky sexual behavior after having the HPV vaccine administered was a common finding in the current research. Read, Joseph, Polishchuk, and Suss (2010) conducted a study based on convenience sampling, which focused on attitudes and perceptions of the HPV vaccine in 175 adolescent girls and 74 parents, specifically in the Caribbean and African-American population. The researchers found that a minority of parents that were studied showed a concern for the HPV vaccine in promoting sexual activity (Read et al., 2010). The study concluded that the need for education about HPV and cervical cancer is high, and the association between knowing about the vaccine and getting the vaccine were also high (Read et al., 2010). There were several limitations to this research, as it was a convenience sample, so generalizations from the study population could not be made. Also validity of self-reported information is at risk due to the sensitive nature of the questions asked and the likelihood of respondents giving accurate, honest responses. The researchers also believe that the cross-sectional nature of the study prevented them from making statements regarding causality and believe that future longitudinal assessments are needed to assess the actual acceptance of the HPV vaccine (Read et al., 2010). Education about HPV and the association between cervical cancer and

genital warts can improve the perception and acceptance of the HPV vaccine in this population (Read et al., 2010).

In a study conducted by Constatine and Jerman (2007), acceptance of the HPV vaccine among Californian parents of daughters was examined. Through a telephone interview, 522 parents were interviewed. Overall, 75% of parents reported that they will most likely vaccinate their daughter before the age of 13 years (Constatine et al., 2007). In the research, three deciding factors were recognized as influences on parent's decisions regarding the vaccination of their daughters. These three factors are perceived dangers of the vaccine, perceived dangers of the disease, and perceived susceptibility to the disease (Constatine et al., 2007). Limitations posed in this research were a language barrier with some Asian-American parents, lack of knowledge of the HPV vaccine, and the efficiency and power of a large telephone survey (Constatine et al., 2007).

HPV and Men. The risk of a women contracting cervical cancer is similar to that of a man contracting penile, oral, and anal cancer from the HPV (Palefsky, 2010). In an article by Palefsky (2010), information was provided on HPV, HPV vaccine, and the types of cancer that a male can contract from contracting HPV. The author suggested that further research is needed in (a) evaluation of safety and efficacy of the HPV vaccine in men, (b) insurance program coverage, (c) implementation of the vaccination in boys, and (d) cost effectiveness analyses (Palefsky, 2010). The author stated that since HPV is a sexually transmitted disease and men are infecting women, morbidity and mortality in women is increasing. The vaccination of adolescent males would decrease the transmission of HPV and decrease HPV rates in both men and women.

In an article by Kubba (2008), information on the HPV vaccine for boys was reviewed. The author stated that evidence from modeling suggested that vaccinating boys would increase the vaccination impact and herd immunity targets may be achieved (Kubba, 2008). Adolescents may be getting the wrong idea about how HPV and sexually transmitted diseases are contracted due to only females getting the vaccination. With this lack of education, males who have already contracted HPV and do not have symptoms could be spreading the HPV without knowing. This author also suggested that further research would be needed in evaluating the cost effectiveness of immunizing adolescent males in order to achieve herd immunity. Without vaccinating males, herd immunity may be lower and not achieved (Kubba, 2010).

In an article by Giuliano et al. (2011), incidence and clearance of type-specific HPV infection was studied in men who resided in Brazil, Mexico, and the U.S. The researchers found that the incidence was constant in men aged 18 to 70 years and residing in Brazil, Mexico, and U.S. (Giuliano et al., 2011). "HPV infections acquired late in life, and those acquired at young ages and persisting, might affect the risk of disease in men and affect transmission to sexual partners at older ages" (Giuliano et al., 2011, p. 8). The authors also stated that past studies showed women have a decreasing incidence in HPV infections throughout their lives, whereas men seem to have a stable risk for acquiring new HPV infections throughout their life. The authors concluded that the incidence and clearance of the HPV infections in males was important in development of realistic cost-effectiveness models for the male HPV vaccination internationally (Giuliano et al., 2011). A need for vaccination at early ages may be the key in decreasing the number of new HPV infected individuals in the future.

Summary

Although parents' perceptions of the HPV vaccine for their adolescent daughters have been extensively studied, parents' perceptions for their adolescent sons have not been studied. The vaccination uptake rate is high among parents who participated in the studies for their adolescent daughter. The bulk of studies found were qualitative, as the researchers were all trying to study the perceptions of the HPV vaccine in the adolescent daughter. This research study also uses a qualitative approach, but the gender of the child being studied is changed. Parents' perception of the HPV vaccine in their adolescent sons was studied in this research.

Chapter III

Methodology

Introduction

The intent of this research study was to examine parents' perceptions of the HPV vaccine for their adolescent sons. A phenomenological qualitative study was utilized to explore what parents' perceptions are of the HPV vaccine in their adolescent sons. The goal of this qualitative study was to have an understanding of what parents are thinking when they are offered the HPV vaccine at their son's medical appointments. This then may help more men and women in being protected against HPV and the cancers associated with HPV.

Design of the Study

A descriptive phenomenological qualitative research design was utilized for this study. Streubert Speziale and Carpenter (2007) describe phenomenology as "a science whose purpose is to describe particular phenomena or the appearance of things, as lived experience" (p. 76). In order to obtain these lived experiences, interviews were performed to obtain parents' perceptions of the HPV vaccine for their adolescent sons. As stated in Streubert Speziale and Carpenter (2007), "descriptive phenomenology involves direct exploration, analysis, and description of particular phenomena as free as possible from unexamined presuppositions, aiming at maximum intuitive presentation" (p. 82).

Population, Sample and Setting

Population and sample. The population studied included one parent from a family that has an adolescent son between the ages of 9 and 15 years. The sample for this study was collected in December 2010 and January 2011 using a snowball technique at a high school function in a small midwestern community. The researcher was able to reach saturation of data after interviewing eight participants. Each participant read the informed consent information, as shown in Appendix A. Informed consent was obtained from the participants prior to the interview. The anonymity of participants was maintained through assigning a number to each participant and not using any identifying information on the transcripts.

Setting. The setting of the interview was chosen by the participant. The setting used was most convenient for the participant in order for the participant to feel comfortable in answering the study questions. Privacy was maintained during the interviews, and the locations chosen were conducive to a tape-recorded interview process.

Data Collection Instrument

Study participants signed an informed consent form prior to participating in the interview. The study was entirely voluntary, and if a participant wanted to withdraw, they could do so at any time during the study. The participants sat down with the interviewer and answered questions that were prepared by the researcher prior to the interview. These questions were: (a) Please describe your beliefs and opinions about vaccinations; (b) What is your experience in vaccinating your son? (c) Where do you get information about vaccinations that you consider the most trustworthy? (d) What have you heard

about the HPV vaccine? (e) What are your thoughts about the HPV vaccine? and (f) What are the factors that are driving your decision about administration of the HPV vaccine?

Data Collection Procedures

After the University of Wisconsin Oshkosh Institutional Review Board approved this study, as seen in Appendix C, the participants were interviewed. Interviews were done in a professional manner, and participants used as much time as necessary in answering the questions. Interviews were done by the researcher. The interviews were done in the participant's private residence to protect the participant's confidentiality. The participants chose the location that was most convenient to them during a time that was convenient, also. The researcher interviewed the participants with the predetermined questions.

Data Analysis

Interviews were recorded via a tape recorder and then transcribed verbatim by a transcriptionist. The interviews were unlabeled and had no identifying personal information. The researcher then extracted the themes that were most pertinent in each interview. Giorgi's (1985) method of data analysis was implemented in the analysis of these interviews (in Streubert Speziale & Carpenter, 2007). The transcripts will be analyzed using Giorgi's seven steps of data analysis as described in Speziale and Carpenter (2007): (a) read the entire description of the experience to get a sense of the whole; (b) Reread the description, (c) identify the transition units of the experience, (d) clarify and elaborate the meaning by relating constituents to each other and to the

whole, (e) reflect on the constituents in the concrete language of the participant, (f) transform concrete language into the language or concepts of science, and (g) integrate and synthesize the insight into a descriptive structure of the meaning of the experience.

Limitations

Some of the limitations present in this research study were the shortness of the interviews between the researcher and the participant. Probing was used, but participants were not interested in sharing any more of their thoughts or beliefs with the researcher due to a lack of knowledge about the HPV vaccine being available to males.

Study participants were parents of sons, thus generalizability was not possible, especially to female adolescents. Since the study was performed in the upper Midwest, the results are limited to this socioeconomic and demographic group.

Summary

The perceptions that parents have of the HPV vaccine in their adolescent son ages 9 to 15 years were explored using qualitative methods. Sample size was small at eight participants, but was able to reach saturation of data. Data analysis was done using Giorgi's method of data analysis, as explained earlier. Limitations were the study could not be generalized to female adolescents or to non-midwest populations and that interview lengths were shorter than anticipated.

Chapter IV

Results and Discussion

Introduction

This chapter presents the results of the study. The themes that were derived from the interviews are described. The purpose of this study was to explore the perceptions of parents regarding the HPV vaccine for their adolescent sons. The research question examined was: What are parents' perceptions of the HPV vaccine for their adolescent son? A descriptive phenomenological qualitative research design was utilized to elicit the perceptions of English-speaking parents of adolescent boys.

Data were collected in January and February 2011. The sample consisted of 8 parents that consented to interviews. Participants signed the consent form, as seen in Appendix B. The participants were then interviewed with the same six questions. These questions were: (a) Please describe your beliefs and opinions about vaccinations; (b) What is your experience in vaccinating your son? (c) Where do you get information about vaccinations that you consider the most trustworthy? (d) What have you heard about the HPV vaccine? (e) What are your thoughts about the HPV vaccine? and (f) What are the factors that are driving your decision about administration of the HPV vaccine? This chapter begins with demographic data and the findings from the interviews. The chapter ends with a discussion of the theoretical framework as a means of explaining the findings.

Demographic Data

A snowball sample consisting of mothers with adolescent sons were interviewed for this research. Involvement in this study was entirely voluntary. All mothers interviewed had higher level education, including associates or bachelor degrees. All mothers had an adolescent boy and some had girls, as well. The breakdown of how many male and female children is listed in Table 1.

Table 1

Children of Participants Broken Down by Gender (n=8)

Participants	Male	Female
3	2	1
2	2	0
1	3	0
1	3	1
1	1	1

Vaccine Education

All participants were asked where they find their most trustworthy information on vaccines. All participants listed their medical provider as their top resource for education on vaccines. The participants had enough trust in their providers that when the time came for vaccinations for their children, they would weigh heavily on the education that was given to them by their provider. One mother stated,

I talked about it a couple of years ago and then one of the providers at the doctor's office said "there is not enough studies on it, you might want to wait a little longer" and that is what has prompted me to wait for him.

This mother was explaining why she was waiting to vaccinate her son with the HPV vaccine and it was because her medical provider said to wait for more education.

Themes

Three themes emerged when analyzing the transcribed interviews using Giorgi's data analysis. These themes are (a) I need to know more, (b) pros and cons, and (c) risk of sexual activity. In the next section, the themes will be explained with the use of quotes from the transcribed interviews.

Theme 1: I need to know more. The first theme derived from this study was *I need to know more*. This is in regards to education and information needed in order to make an informed decision about giving the HPV vaccine to their son. One mother stated,

I would need to know more about it; but if it's a vaccine that has been out there and they have been giving it, I probably would do it if it is going to help prevent something major going on with my children.

This mother was interested in giving the vaccine to her son, but she wanted more information about what the vaccine would actually protect her son from in the future. Mothers appeared to be more willing to give the vaccine if they knew through education that the vaccine was going to do something for their son in the long run.

Another mother stated, "I would need to know the side effects and the risks involved." Again this mother would also vaccinate her son if the education was there. Knowing the side effects and risks involved would satisfy this mother in giving the vaccine. Mothers were interested in seeing research and case studies that proved this did protect a child from HPV in the child's future.

I would have to wait and see what happens with it, seeing it is fairly new yet. I would like to see some more case studies and see how it works as far as now and then later on the effects of it. If it actually does help.

Another participant felt that she had made her decision about not administering the vaccine to her sons until they were able to make the decision on their own. When posed with the question if she had more information about the vaccine would she change her mind, she responded,

In that it would give you more to think about and more information to make a more informed decision, because honestly I don't know enough about it and I didn't know it was available to boys and I always thought that it didn't make sense to just give it to the girls. The boys are the carriers, so is there a way to help them too and to keep them from infecting women.

With enough education and resources, parents would be able to make a more informed decision to vaccinate or not vaccinate their sons. With this knowledge, a provider could advocate the HPV vaccine for their patient through education and take home research, if the parent is interested. This need for education has been proven in other studies that were done with adolescent females, as parents needed more education about HPV, and the association between knowing about the vaccine and getting the vaccine were high (Read et al., 2010).

Theme 2: Pros and cons. The second theme has to do with the participants weighing the pros and cons of the vaccine in order to make a decision about vaccination. Many different pros were brought up between each participant, including prevention of something major, preventing disease, and preventing cancers. The cons that were listed included side effects, too young to receive, not sexually active, long term effects, odds of

increasing health, and is there a real benefit of receiving the vaccine. A statement made by one participant:

I guess the pros and cons, if you didn't have the vaccine, what are the possibilities and what could you get versus what are the odds of this increasing my child's health. Is this really truly a benefit of five percent? Then maybe not; or is it greater than that? Is this really benefiting my child's health?

This is another participant that is in need of education before the administration of the vaccine to their son. Another participant voiced her concern about the lack of education that is the basis for her pro and con assessment, "Also I am not the person that goes out and grabs the vaccination right away. I kind of wait for a while, to see if there are side effects, the pros and cons and if it is really necessary." The cons seem to outweigh the pros throughout many of the interviews that were done.

The pros of one interview seemed to really be important to the participant and she will be vaccinating her son. The participant made many statements about the prevention of cancers in relationship with the vaccine. "It prevents against human papillomavirus; can prevent cervical cancer in women and venereal warts in both girls and boys." This participant also stated, "I think it is important to reduce the amount of cervical cancer in women." She was interested in the vaccine knowing that her son could be the person that causes a woman to have cervical cancer. She was well educated on the vaccine through her doctor and stated "definitely for it, my daughter has had it and my son is going to get it on his next physical."

Other participants knew about the advantages of the HPV vaccine in the prevention of cancer.

I don't know if it's a controversy or just a lot of talk that the females should get it, and it is a huge thing for them to prevent cancers and if I had a daughter I would probably/definitely check into it and I would most likely get her vaccinated.

This participant did not seem to understand that males were involved with the transmission of HPV to females. She also did not have a daughter to take into consideration.

In past research done with adolescent females, three factors were recognized as influences on parent's decisions regarding the vaccination of their daughters. These three factors are the perceived dangers of the vaccine, perceived dangers of the disease, and perceived susceptibility of the disease (Constatine et al., 2007). These three factors appeared to be the pros and cons that parents were considering when vaccinating their adolescent female child. No studies were done to show the pros and cons of vaccinating an adolescent male.

Theme 3: Risk of sexual activity. The third theme derived from the interviews was *risk of sexual activity*. Parents used the knowledge of their son's sexual activity to help make a decision regarding vaccinating their sons. Some participants believed that they did not need to worry about vaccinating their sons until they were sexual active. One mother stated, "So, it depends on the sexual activity that your child has too, so hopefully my kids don't start." There seemed to be some denial present in this participant's interview. Another statement by the same participant was, "Boys mature so much later in life, so I would probably wait until their late teens or early 20's to get it done." When taking into consideration the vaccine in her son, she thought she would wait because her sons would not be sexually active as soon as her daughter. She

states “I had my daughter do it, she was 14.” This participant vaccinated her daughter at age 14.

Another participant was well aware of the sexual component of this vaccination.

If it can help prevent HPV and I know that he is at an age where he is sexually active, I think it needs to be something we visit sooner rather than later; anything to prevent any illness or disease or whatever that you can do, why wouldn't you? It just makes sense.

One participant stated that she will not be able to start talking with her sons about the HPV vaccine until they have the serious sex discussion.

I don't know if I would do it at age 11. I would maybe wait until they were 14 or so and have the serious sex discussion, I think we talk about it earlier than that, but when they get to an age where they are starting to date and be more interested in girls.

This mother also stated, “But if they get into a relationship and don't want to wait or they decide forget it, I'm just going to go and have sex, they have to decide that for themselves.” This is in reference to the HPV vaccine and their son making their own decision on getting the vaccine or not at the point of becoming sexual active.

Research on adolescent females revealed that a minority of parents studied showed a concern for the HPV vaccine in promoting sexual activity in their daughters (Read et al., 2010). Some participants in this study were concerned about waiting until their adolescent son was sexually active to receive the vaccine in order for the son to understand why he was getting it. The researcher in this study was unable to find previous studies that showed the same conclusion.

Theoretical Framework

In this qualitative phenomenological study, the theoretical framework used was the Health Belief Model (Pender et al., 2006). “The HBM is derived from cognitive theory, primarily the work of Lewin” (Pender et al., 2006, p. 38). Since 1974, the HBM has been expanded and developed into six main constructs which include: (a) perceived susceptibility, (b) perceived severity, (c) perceived benefits, (d) perceived barriers, (e) cue to action, and (f) self-efficacy (National Cancer Institute, 2005, p. 12).

In this research study, mothers were making their decision on vaccinating using the Health Belief Model. Mothers were using their knowledge of the disease and their prior contact with HPV in order to perceive the susceptibility of their son acquiring HPV and the perceived severity as what seriousness the disease would pose in their lives. Also, mothers did not understand the threat or lacked knowledge regarding HPV in their sons, and this appeared to be a perceived barrier in the vaccination of their sons. Participants voiced the need for more education on the HPV vaccine and HPV disease in order to be able to make their decision or take action in vaccinating their sons. Self-efficacy was shown when a participant was willing to let their son make the decision about getting the vaccination when he was ready.

Summary

This chapter presented the results of the study. Demographic data and the themes that were derived from the interviews were provided. All of the questions were centered on vaccination and, in particular, the HPV vaccine for adolescent boys. The next chapter will provide the summary; conclusions; and implications for practice,

education, and administration for providers, as well as recommendations for further study.

Chapter V

Summary

The purpose of this study was to elicit the perceptions of parents regarding the HPV vaccine in their adolescent son. The sample included eight participants interviewed and asked the same six questions regarding the HPV vaccination for their adolescent son. All of the participants entered the study voluntarily and informed consent was obtained.

The interviews were completed and transcribed. Themes were developed through the statements gathered from the participants. Through analysis of the transcribed interviews, three themes emerged. The first theme was *I need to know more*, as in the parents needed to know more about the vaccine and HPV before they were able to make an educated decision about vaccination. The second theme is *the pros and cons*, where the participants seemed to be weighing the education they already had to see if the pros outweighed the cons of the HPV vaccine. The third theme was *risk of sexual activity* and the participants voiced concern that they will not vaccinate their sons until they are sexually active or of age where they understand where HPV comes from. Parents were also not giving the vaccination because their son was not sexually active yet, and didn't feel that there was a need to vaccinate until then. The themes were supported with direct quotes that were taken from the interviews.

Conclusions

The results are only generalizable to rural mothers due to the fact that mothers were the participants that were interviewed in a small Midwestern town. The following conclusions may be drawn:

1. Participants in this study needed more education on the HPV.
2. Participants in this study got their knowledge on vaccinations from their health care providers.
3. Participants in this study wanted and needed more education on the HPV vaccine.
4. Participants in this study believed that age 9 was too young to start the HPV vaccine.

The Health Belief Model was used for a theoretical framework and the results that were found are explained in Figure 2.

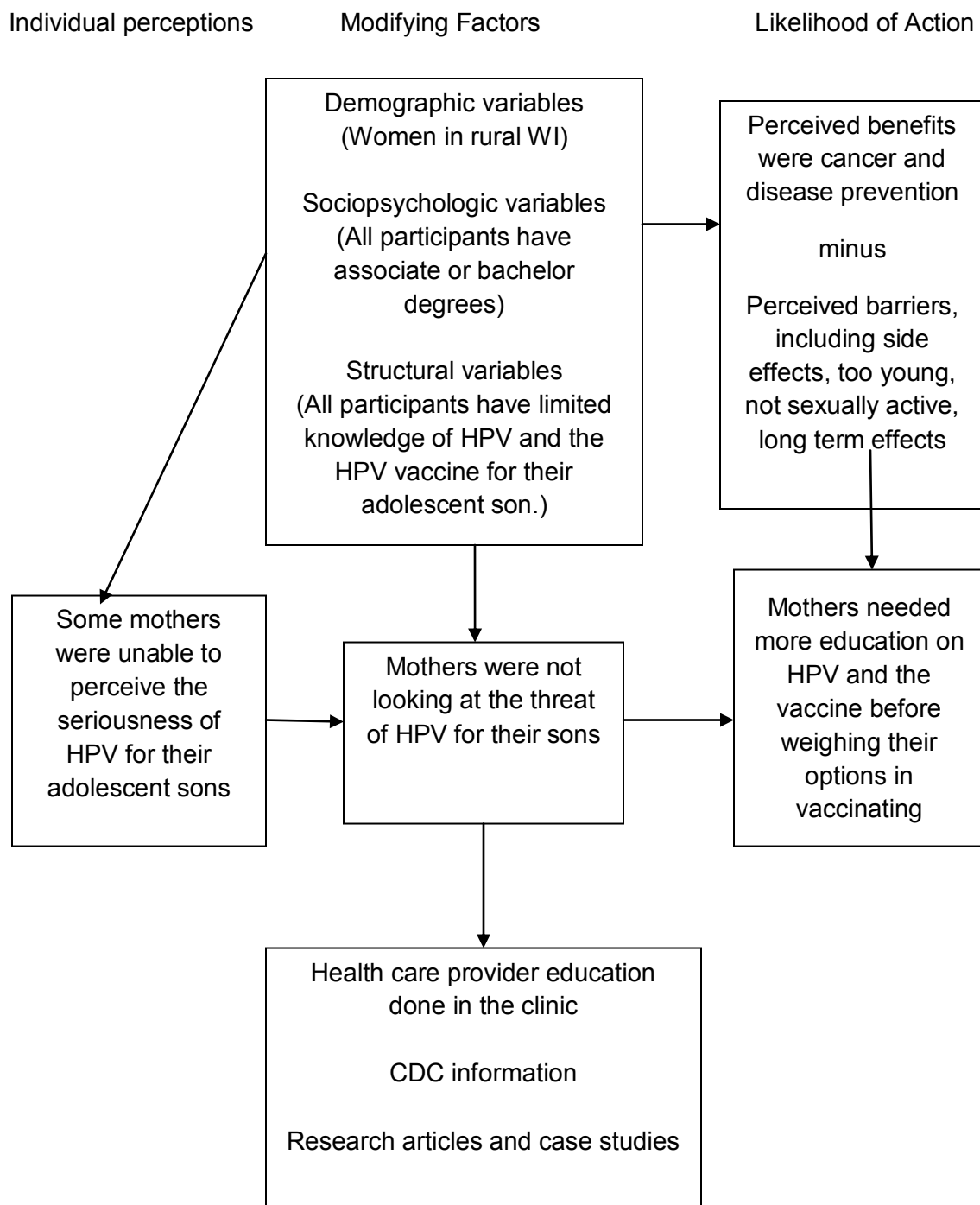


Figure 2. Health Belief Model (Pender et al., 2006) adapted for current study.

Using the adapted Health Belief Model (Figure 2) shows us what modifying factors are used by a parent making a decision on vaccination. The modifying factors are the knowledge of HPV, parents not thinking that HPV will happen to their sons, health care provider education, and research articles and case studies. These modifiable factors impact a parent's decision to vaccinate their sons. The likelihood of action refers to the benefits and barriers parents perceive when it comes to vaccination. When a parent is able to weigh the benefits and barriers with education and the threat of their son being infected with HPV, that parent can then make an informed decision about vaccinating against HPV.

Implications for Practice

The implications for practice are significant and important in the vaccination of adolescent males against HPV. This study provided a primary care provider with some parents' perceptions of the HPV vaccine before offering the vaccine at a visit. Education may be developed based on the perceptions from this study in order to help vaccinate more adolescents in the future. Parents are in need of education from the health care provider when it comes to administration of vaccines.

All mothers in this study reported that they received education on administration of vaccines from their health care provider. As a health care provider, education needs to be done on the HPV vaccine, and the risks involved with not administering the vaccine should be provided to parents that are making the vaccination decision. Advanced practice nurses may be able to give this education at well child visits when the parents are being presented with vaccinations. Presenting the HPV vaccination with other vaccinations that are required may be a great time to educate a parent about the

implications of HPV and their adolescent son. If a parent decides to go home with fact sheets and information on the HPV vaccine, the provider should flag the patient's immunization log with this information, so that the next provider can educate and offer the vaccine at the next appointment.

Education can also be given to parents from school. If a school was able to give education to parents prior to vaccination days, the parents may be able to make an informed and educated decision whether to vaccinate their sons. These vaccination days are common in schools and can be used in the prevention of HPV in adolescents.

Mothers showed a great interest in education and learning when it comes to making an informed decision to vaccinate. Education can be in the form of case studies, research articles, and vaccination information sheets.

Recommendations for Further Study

The findings of this study suggest that mothers' beliefs and perceptions about the HPV vaccine are important to the end result of vaccinating their sons. The ideal research model that would be confirming the findings of this study is a longitudinal study. A larger sample size is also needed in order to collect more data that is relevant to the vaccination against HPV.

Conclusion

In conclusion, the study found that more education is needed to help parents make an informed decision about vaccinating their sons against HPV. Education can be developed with the use of this study and knowing what pitfalls parents have when it

comes to the HPV vaccine. When parents have more education, hopefully, more male adolescents will be vaccinated against HPV in the future.

APPENDIX A
INFORMED CONSENT INFORMATION

Informed Consent Information

Title of Research: Parent's Perceptions of the Human Papillomavirus vaccine for Their Adolescent Son

Investigator: Emily Weiss, RN, BSN

Before agreeing to participate in this research study, it is important that you read the following explanation of this study. This statement describes the purpose, procedures, benefits, risks, discomforts, and precautions of the study. Also described are the alternative procedures available to you, as well as your right to withdraw from the study at any time. No guarantees or assurances can be made as to the results of the study.

Explanation of Procedures

This research study is designed to examine the perceptions of the Human Papillomavirus vaccine in your adolescent son. Emily Weiss, a graduate student at the University of Wisconsin, Oshkosh, is conducting this study to learn more about how parents feel about the HPV vaccine in their adolescent son. Participation in the study involves completion of one interview, which will last for approximately 20 to 40 minutes. The interview will be audio taped by the researcher and later transcribed for the purpose of data analysis. The interview will be conducted at a setting that is mutually agreeable to the participant and the researcher.

Risks and Discomforts

There are no risks or discomforts that are anticipated from your participation in the study. Potential risk or discomforts include possible emotional feelings when asked questions during the interview.

Benefits

The anticipated benefit of participation is the opportunity to discuss feelings, perceptions, and concerns related to the HPV vaccine in your adolescent son.

Alternative Treatments

Because this study does not involve specific treatments or procedures, there are no known alternative treatments to participating in this study.

Confidentiality

The information gathered during this study will remain confidential in a locked draw during this project. Only the researcher and faculty research advisor will have access to the study data and information. There will not be any identifying names on the tapes, and participant's names will not be available to any-one. The tapes will be destroyed at the completion of the study. The results of the research will be published in the form of a graduate paper and may be published in a professional journal or presented at professional meetings. Identifying information will not be used in publications that are done from the research gathered. The information will help primary care providers produce education necessary for parents in the understanding of vaccinating or not vaccinating their son against HPV.

Withdrawal without Prejudice

Participation in this study is voluntary; refusal to participate will involve no penalty. Each participant is free to withdraw consent and discontinue participation in this project at any time without prejudice from this institution.

APPENDIX B
CONSENT FORM

Informed Consent

Title of Research: Parent's Perceptions of the Human Papillomavirus vaccine for Their Adolescent Son
Investigator: Emily Weiss, RN, BSN

New Findings

Any significant new findings that develop during the course of the study, which may affect a participant's willingness to continue in the research, will be provided to each participant by Emily Weiss, RN, BSN.

Cost and/or Payment to Subject for Participation in Research

There will be no cost for participation in the research. Also, participants will not be paid to participate in this research project.

Questions

Any questions concerning the research project and/or in the case of injury due to the project, participants can call Dr. Judy Westphal (faculty advisor for this project) at 920-424-3017. Questions regarding rights as a person in this research project should be directed to [please place name of current IRB chairman here], University of Wisconsin, Oshkosh.

Agreement

This agreement states that you have received a copy of this informed consent. Your signature below indicates that you agree to participate in this study.

Signature of Participant and Date _____

Participant name (printed) _____

Signature of Researcher and Date _____

APPENDIX C

UW OSHKOSH IRB APPROVAL LETTER



December 3, 2010

Ms. Emily Weiss
E10724 Otter Creek Rd
Prairie du Sac, WI 53578

Dear Ms. Weiss:

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: What are Parent's Perceptions of the HPV Vaccine for Their Adolescent Sons?

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,

A handwritten signature in black ink, appearing to read "Frances Rauscher".

Dr. Frances Rauscher
IRB Chair

cc: Dr. Judith Westphal
1902

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