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# Patient Perspectives of Physicians' Compliance Gaining Strategies

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PATIENT PERSPECTIVES OF PHYSICIANS'  
COMPLIANCE GAINING STRATEGIES

A Thesis submitted to  
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Marshall University

In partial fulfillment of  
the requirements for the degree of  
Master of Arts

Communication Studies

by  
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## Abstract

This research examined strategies used by physicians for compliance gaining and patient responses to those strategies. Respondents were surveyed regarding their expectations about strategies physicians would use to gain compliance with requests related to changing lifestyle behaviors and how the respondents anticipated they would respond to physicians. Findings revealed that patients did anticipate specific persuasive strategies from physicians and anticipated responding in specific ways. Most respondents expect expertise strategies from physicians and plan to comply. Expertise strategies, however, were also linked with patients who planned to defy or ignore their physicians' requests. Findings suggest that future research into why patients who intend to comply do not follow through and what strategies may be more effective on patients who do not anticipate compliance would be valuable.

## Chapter One: Introduction

Health care in America is in the midst of a tremendous upheaval with the enactment of H. R. 3590, the Patient Protection and Affordable Care Act (2009). This bill was intended to increase the availability and quality of health care available to Americans; however, it addresses only a small number of the issues driving up the cost of health care in the United States. In addition to the changes proposed in this bill, it is equally if not more important to study existing processes in the health care system that can be improved to increase the effectiveness of health care available today. The Patient Protection and Affordable Care Act focuses on the accessibility and affordability of health care, but there are many aspects of health care interactions involving patients and physicians that can be improved upon to increase the effectiveness of health care while simultaneously reducing the cost. One area that has seen a huge growth in interest is patient adherence to prescribed lifestyle and medical regimens. Numerous studies have shown that thousands of lives and millions of dollars could be saved if patients were more successful at making recommended lifestyle changes and following medical advice and regimens (World Health Organization, 2003; DiMatteo, Haskard, & Williams, 2007; National Council on Patient Information and Education, 2007). In 2003, the World Health Organization (WHO) asserted that “adherence is an important modifier of health system effectiveness” (2003, p. 11). Any improvement in adherence rates of patients would serve to increase the effectiveness of health care systems and lessen the economic burden imposed by health care in general.

Lack of compliance and adherence to medical regimens and lifestyle changes prescribed by physicians is a major problem in health care. Non-adherence contributes significantly to the number of people admitted to hospitals and nursing homes, which, in addition to the health ramifications of non-adherence, causes the amount spent on medical care to skyrocket. Non-adherence can cost patients a potential \$2000 annually for additional visits to doctors and, when combined with the number of patients who are hospitalized, admitted to nursing homes, and who die prematurely, the annual cost explodes to over \$177 billion. It is estimated that non-adherence causes up to 125,000 deaths each year and although non-adherence can be found across a range of demographics, groups at highest risk for the grave results of non-adherence are people aged 65 and over, teenagers and children, and the underserved, which includes those living at or below the poverty level as well as those living in areas without adequate access to medical professionals (National Council on Patient Information and Education, 2007). According to Brownell, Marlatt, Lichtenstein, and Wilson (1986) the majority of people who are advised to make lifestyle changes such as improving diet, stopping smoking, or beginning or increasing physical activity will not make those changes either because they are unwilling or feel they are unable.

Some improvements in patient adherence have been seen. Research has shown that adherence rates after 1980 are higher than those prior to 1980 (DiMatteo, 2004). Still, the frequency of nonadherence, and the economic and emotional costs created by non-adherence are quite substantial and warrant

additional research into adherence. The improvement in adherence rates has been attributed to an increase in medical efficacy, the increased awareness of physicians and health providers of the results of and reasons for non-adherence, and increased involvement of patients in their health care and maintenance.

The purpose of this thesis is to examine one area of concern in the adherence/compliance literature, which is whether or not patients anticipate physicians will use specific strategies to gain compliance. Additionally, this study looks at how patients anticipate responding to those persuasive strategies. Research in the area of adherence has focused on several different areas such as physicians' understanding of health beliefs of their patients (Street & Haidet, 2011), how physicians can predict non-adherence (Davis, 1967), how physicians respond to patients who are non-compliant (Helme, 2004), and persuasive strategies used by physicians to gain adherence (Burgoon et al., 1987). Lacking though, are studies related to patient response to persuasive attempts by physicians. Klinge (1993) referred to the lack of theory and research to determine the relationship between physicians' compliance gaining strategies and patients' response as a "dearth" (p. 284). Klinge further noted that most research focused on either describing the interaction between health care provider and patient or on how patient satisfaction with the interaction affects compliance. Research that has focused on patients' responses to compliance gaining strategies in medical interaction has usually focused on situations in which medical intervention is imperative and the situation being addressed is severe (Anker & Feeley, 2011). More recently van Servellen (2009) noted that,

although there has been extensive research on persuasive tactics and strategies used by physicians, there is very little research regarding patients' response to that persuasion.

The following literature review addresses research of internal and external factors affecting patient adherence, the effect of communication satisfaction upon adherence, and persuasive strategies employed by medical professionals to gain adherence. An overwhelming conclusion from all of the studies is that, in measures of adherence, communication between patients and health care providers is of paramount importance.

## Chapter Two: Literature Review

Before reviewing previous findings, it is important to clarify the terminology used in past theorizing and research studies. From the 1950s forward, “compliance” was the term most often used to describe patients’ acceptance and action of following medical advice and treatment plans issued by their physician. In recent years, though, the term “compliance” has come under scrutiny and been considered biased as it ascribes a passive nature to patients and makes patients’ decisions that disagree with health care providers seem rebellious or irrational. Because of this conflict over terms, the National Council on Patient Information and Education (NCPIE) has adopted the use of the word “adherence.” Adherence is defined as “following a medicine treatment plan developed and agreed upon by the patient and his/her health professional(s)” (2007, p. 10). For the purpose of this work, the terms “compliance” and “adherence” are used interchangeably, though adherence is most often used in discussions of impact of adherence, and compliance is most often used in discussions of strategies designed to produce adherence.

### *Internal Factors That Affect Adherence*

Patients’ adherence to recommended behavior or prescriptions is often imperative for health to be maintained or improved. What patients think about dangers to their health, their ability to affect those dangers, and the treatment options that are available and feasible for them will affect their desire to adhere to changes. The Health Belief Model (HBM) proposes that individuals’ motivation to change is based on their belief that they can or will be impacted by the health

challenge, how seriously the health challenge will affect them, if the benefits of taking preventive or avoidant measures are worthwhile, and if the social, economic, or physical costs will be acceptable (du Pré, 2010). This model is supported by much of the research regarding adherence and the factors affecting adherence.

Internal factors related to adherence include patients' beliefs about their ability to enact health behavior changes, conditions or situations in their lives that make them feel they will not be able to enact or control making those changes, or any internal factors over which the patients holds some degree of control. Another important internal factor is that patients feel they are not able to be active participants in health maintenance or decisions. This insecurity does not have to be the case, however. Roter and Hall (1992) discovered that patients want to communicate with their health care providers and, in fact, want as much information about their health, health maintenance, and preventive efforts as their doctors will provide. This finding indicates that patients are willing to enter into a dialogue with their health care providers. Moreover this finding indicates that doing so would give patients the opportunity to engage with providers in discussions about all areas of their health, including debating behavioral changes or prescription regimens, which in turn would increase likelihood of patients and physicians reaching a consensus on treatment or behavior. Consensus would likely encourage adherence to behavioral or medical changes because patients and physicians were both involved in the decisions and agreed on the efficacy of choices made (DiMatteo, Reiter, & Gambone, 1994; DiMatteo, 2004).

Additional reasons patients do not comply with their providers' recommendations are misperceptions and denial about severity of illness, misunderstanding the need to complete a full medicinal regimen, considering preventive measures unnecessary because symptoms have not presented, fear of stigma attached to illness and medication, lack of confidence, and lack of motivation (National Council on Patient Information and Education, 2007). When these reasons are coupled with the high cost of prescription regimens, patients may not only feel disinclined to follow doctors' recommendations, they may also feel they are unable to follow them. Also contributing to non-adherence is low health literacy. Patients who already have several factors weighing on their decision to adhere or not may just give up if they find it difficult to interpret or understand the instructions physicians or pharmacists provide them. Patients who have difficulty understanding health instructions or who have low health literacy have been found to be ashamed of asking for assistance (National Council on Patient Information and Education, 2007).

Although patients in worse overall health will comply with their doctors' advice if their situation is not very severe, patients with severe illnesses are less likely to adhere to doctors' requests (DiMatteo, Haskard, & Williams, 2007). This lack of adherence remains the same regardless of whether the perception of severity is on the part of the physician or the patient. There are several possible explanations for these patients' response. Severely ill patients may lack the energy or ability to comply with some requests, or they may feel that adherence will have little impact on the quality or length of their lives. As well, physicians

may feel that there is little they can do to convince a severely ill patient of the benefits associated with following their advice, or they may feel ill equipped to handle or communicate effectively due to the emotional distress experienced by a severely ill patient. Nonetheless, there are benefits to be realized by these patients though, and these benefits should contribute to physicians' willingness to communicate about quality of life benefits along with treatment options or prescriptions. This consideration also reinforces the body of research suggesting that medical professionals receive more training in interpersonal communication, especially for helping severely or critically ill patients.

A contributing factor to non-adherence is the difficulty of incorporating some treatments. Medication regimens are shown to have a higher adherence rate than lifestyle change suggestions (DiMatteo et al., 2007), and it is purported that this is because medication regimens have standard rules controlling dosage amounts and times. This finding is logical in that there can be daily steps involved, and, once the steps have been completed, the patient has adhered. Lifestyle changes, however, can be much more difficult to enact in daily life. Diet, exercise, smoking cessation, cognitive mental practices, and any number of health-enhancing behaviors can be difficult to incorporate into our lives. In all, behavior modification is the most difficult of all changes to incorporate, surpassing following medication regimens. Diet regulation and overall change of eating habits have been seen as major obstacles for diabetes management for many patients (Matthews, Peden, & Rowles, 2009; Parchman, Flannagan,

Ferrer, & Matamoras, 2009) whereas those same patients report higher adherence to medication regimens.

### *External Factors That Contribute to Non-Adherence*

External factors that can affect a patient's ability to comply with physicians' requests are any factors outside of patients' control, such as access to necessary medications or assistance to comply, financial difficulties, or any other environmental influences that hinder or oppose adherence. One predictor of adherence is a patient's access to social support. Patients who have family or social networks available to engage in dialogue with physicians and then encourage the patient in adhering to the doctor's advice are more likely to exhibit continued adherence over time (DiMatteo, 2004; DiMatteo et al., 2007).

Factoring into the non-adherence of patients with a severe illness is that, in those situations, stress and anxiety associated with such illnesses can contribute to the decline of a social support network. Research shows that physician intervention to encourage and shore up the support network can lead to increased adherence to treatment plans. This research emphasizes the need for physicians to recognize and welcome a patient's support network into interactions and meetings discussing treatment options and risks and benefits of those options. As well, health care providers have been urged to set up in-home visits to view patients in the process of enacting recommendations. This continual reinforcement contributes to adherence (National Council on Patient Information and Education, 2007).

One realm in which social support is imperative is in pediatrics. Children require that their social support network, usually parents, be active participants in their health care practices. This need requires pediatricians to communicate both with the parents and the children to make sure that both parties understand the importance of adherence (Zolnierek & DiMatteo, 2009). The implication is that, by including both children and adults in the communication, children are taught the importance of following doctors' advice and communicating with doctors about treatment and other issues. This improved communication could also increase children's sense of self-efficacy or ability to influence aspects of their health.

Patients who do not have access to a support network will sometimes become overwhelmed by their health problems, which can lead to depression. Depression can be a contributing factor of the non-adherence of patients who are severely ill. Social support can take many forms. Networks can include friends, family, spouses, life partners, coworkers and more. The lack of that support leaves a severely ill patient dealing with the difficulties and ramifications of his or her illness alone. Without that support and encouragement, it is not surprising that a feeling of inability to initiate change or consistently care for all of one's health needs may set in and could easily lead to a breakdown in communication with health care providers contributing to non-adherence (DiMatteo, 2004).

A fairly new and interesting alternative for patients with a limited support network is the Internet (Weaver, Thompson, Weaver, & Hopkins, 2009). The Internet is a developing method for individuals to communicate with others about their health care needs and situations. Chat rooms and blogs provide ways for

patients to share their experiences and gain insights from others who are struggling with similar conditions. This media could provide social support necessary to mobilize patients who lack that support in face-to-face interactions. As well, such communication could encourage patients to discuss their conditions and treatment options with their health care provider.

The Internet is also thought to have negatively impacted patients' adherence in many health situations. Because the Internet is a free space and there is limited control of information, health consumers may find information that is incorrect or misleading. Weaver et al. (2009) found that more than ten percent of the participants involved had discontinued or altered treatment prescribed by their health care practitioner in deference to information they found on the Internet. In light of the abundance of information available on the Internet, physicians must be prepared to question patients carefully about their beliefs and correct misunderstandings.

Education and socioeconomic elements also affect adherence. Higher rates of adherence are found in individuals from higher socioeconomic groups and individuals who are more highly educated. This difference is believed to result from higher levels of communication competence among these individuals, leading to more complex discussion and collaboration between these patients and their health care providers (Parchman et al., 2009; Street, Makoul, Arora, & Epstein, 2009). Kahn and Luce (2003) discussed how communication competency can affect individuals who have been exposed to false-positive test results. These patients were found to be less likely to adhere to future testing

appointments because of frustration or fear experienced when they received a false-positive result from a health examination. The researchers found that communication competence on the part of the patient, coupled with an information intervention, designed to assist with coping and thoroughly explaining the false-positive result and provided by the health care practitioner, would result in the patient maintaining future scheduled testing appointments.

#### *The Effect of Communication Satisfaction on Patient Adherence*

In addition to the instrumental factors discussed above, a number of relational factors have been identified that increase (or decrease) the likelihood of patient compliance. For example, there is substantial evidence that improved communication between patients and providers provides increased satisfaction with their interactions (Daly & Hulka, 1975; Korsch & Negrete, 1972) and that increased satisfaction on the part of the patient is likely to result in increased adherence to health care recommendations (Burgoon et al., 1987; Burgoon et al., 1990; DiMatteo, 2004; Golin et al., 2002). Based on this research, communication training in compliance gaining that incorporated strategies and methods designed to increase patient satisfaction in physician – patient interactions would be valuable.

Collaboration between providers and patients has increased in importance, and a common finding is that collaboration between parties in a medical interaction increases satisfaction for both parties (van Servellen, 2009). This increased satisfaction leads to the likelihood of compliance on the part of

patients, which, in turn, reinforces and encourages medical practitioners in the use of collaboration.

A new focus in health care shifts communication from being physician-centered to an interaction or partnership between physician and patient. The interaction is focused more on patients and their needs but is still a partnership in which both work to improve the health and care giving for patient (Balint & Shelton, 1996). Patients who perceive their physicians to be more caring and willing to listen are more likely to be at ease and share feelings more comfortably (Schmid Mast, Hall & Roter, 2008). Patient-centered or collaborative communication allows physicians and patients to enter into a dialogue as equal contributors. This partnership allows for both providers and patients to experience higher satisfaction with the encounter (Geist & Dreyer, 1993).

Further, Burgoon et al. (1987) found that relational communication affected patients' feeling of satisfaction in their health care encounter. Satisfaction in health care encounters would increase the probability of patients following up with future appointments and maintaining the status of their health care decisions and discussions. Roter (1983) determined that the most common reason for patients' dissatisfaction with medical interactions was poor communication.

#### *Persuasive Strategies Employed by Health Care Providers*

In the past, health care providers viewed non-adherence as an irrational choice by patients (DiMatteo et al., 1994). The reasoning for this view is twofold. First, providers have been trained in medicine and have expertise in the area that

most patients do not, and providers operated under the assumption that, if patients come to them seeking to improve their health, they would follow the advice of the medical professional. Second, physician training has created a socialization process that includes an attitude of superiority and dominance. Physicians are taught that, in health care situations, they are responsible for contributing to or creating the health of their patients. This responsibility creates a necessity to direct patients in what to do to improve their health. This socialization process explains the expertise based compliance gaining strategies often used by physicians. Research has since shown that adherence is greatly impacted by the communication strategies of physicians and, in fact, is influenced by many different factors. These factors make patients' adherence choices neither rational nor irrational decisions but the result of complex interactions in which patients must consider outcomes, weigh benefits, detriments, and feasibility of acceding to doctors' recommendations (DiMatteo, et al., 1993; Donovan & Blake, 1992).

The success of gaining compliance will be affected by the particular circumstances of the interaction, the relationship of the participants, and the strategy used by the participant trying to gain compliance. All of the circumstances can change or affect an interaction, but literature in this area has paid substantial attention to the strategies employed by health care providers when trying to gain patients' compliance and the importance of relational satisfaction to gaining compliance. Burgoon et al. (1987) developed and utilized a list of seventeen verbal strategies designed to gain compliance in their study

measuring the correlation of relational satisfaction and compliance. The list of strategies included examples such as promise, threat, use of expertise in positive or negative manner, moral appeal, esteem, debt, and altruism. Much of the later research on compliance and adherence gaining attempts utilizes strategies from this list in analysis. Burgoon et al. (1987) determined that communication strategy greatly influenced relational satisfaction between patients and providers which then affected compliance and adherence of patients. The use of negative expertise or verbally aggressive tactics resulted in patients feeling less of a connection with providers, which negatively impacted satisfaction in the health care experience. The impact on satisfaction, in turn, was measured to have a negative impact on compliance and adherence to medical requests. The use of positive expertise or positive moral appeal left patients feeling a stronger relational connection to the provider and increased the rate of satisfaction and compliance. This finding is corroborated by later studies (Burgoon et al., 1990; Golin, DiMatteo, Duan, Leake, & Gelberg, 2002; Parrott, Burgoon, & Ross, 1992). The use of negative communication strategies used in an interpersonal manner by sources patients perceived as credible resulted in patients refusing to comply with the requested change (Reynolds, Kober, & Burgoon, 1982).

Another aspect of compliance affected by both positive or negative language and compliance gaining strategies is the use of discussion of long-term benefits or detriments of compliance versus short-term results. It seems that patients are less affected by physicians' discussions of the long-term affects lifestyle or health behavior changes will bring than by discussions of short-term

benefits (Klinge, 1993; Simmons, et al., 2009). This finding implies that many patients who perceive that they will see positive results in a shorter period of time may believe they will be more likely to continue adherence. Various studies (Parrott et al., 1992; Nunes & Ayala, 2010; Simmons, et al., 2009) propose that physicians should formulate communication patterns in which, at each consecutive visit with a patient, they verify the changes the patient has made and is adhering to, provide positive reinforcement, and continue to use compliance gaining techniques that incorporate both long-term benefits and short-term benefits of a lifestyle change if appropriate. If this communication method were put into practice in health care interactions, it would be valuable to have knowledge of patients' response strategies. This knowledge would allow health care providers to read patients in terms of how they understand and are invested in making the health change, allowing them to move along the continuum of strategies when they were satisfied that a patient has reached a certain stage.

It is important to note that the seeming preference or attraction to positive messages was impacted by severity of illness. Patients whose illness was more severe or serious prompted a more dominant authoritarian style from physicians. The patients were accepting of this and reported a higher likelihood of adherence. This report could be because they believed the physicians understood the seriousness of their medical condition and were taking a more active role in directing actions related to their health (Burgoon et al., 1987). Physicians also responded more dominantly when introducing suggested changes to patients with which they knew the patient had not previously

complied. In this case, physicians tended to take a more authoritarian role in directing patients to change and were more likely to use negative expertise tactics to encourage that change. These patients responded well to the change in strategy and it was purported that the response may be a result of guilt from previous non-compliance.

In children's' medical visits, compliance gaining strategy use is surprisingly limited (Nunes & Ayala, 2010; Parrott et al., 1992). Pediatricians were found to ask parents mostly closed ended questions. Researchers posit this tactic might limit the input parents gave as well as intimidate them about asking for additional information or broaching other health issues of their children. Parents in these studies reported perceptions that the physician was rushed or uninterested. Only when parents were asked a health or behavior question about their child that they answered in a way the physician deemed inappropriate were compliance gaining strategies used. Most often the strategies used were expert based, stressing the positive benefits of complying with the request (Parrott et al., 1992). Pediatricians were not found to urge parents to continue well-child visits, which can be considered preventive health maintenance. This finding provides potential for improvement in the medical communication as it relates to compliance and patient satisfaction. If children see their doctors and parents engaging in dialogue about their health, perhaps children would be more likely to adopt and continue this trait, increasing their own health communication skill. As well, if pediatricians use compliance gaining strategies to encourage parents to continue and actively pursue preventative health maintenance for their

children and succeed, there is the potential for children to develop a cultural norm of communication and compliance with health professionals.

More recent research on physicians' compliance gaining strategies of physicians involves the use of collaborative health communication, involving patient and provider in just such a dialogue as suggested above (Arbuthnott & Sharpe, 2009; DiMatteo et al., 1994; DiMatteo, 2004; National Council on Patient Information and Education, 2007). Providers must recognize that, when patients do not ask questions or take an active role in their health choices, they are often intimidated or unsure to what extent they should be involved. It is up to physicians and other health care providers to communicate in such a way that patients are drawn into this dialogue and become active participants. Feeling that they are a part of their health care process increases the probability of patient compliance and long-term adherence to medical recommendations.

Another aspect of physician communication in compliance gaining is the effect of non-verbal communication. Sometimes, what a physician says may have less effect than the way he or she says it. Providers and patients alike communicate non-verbally as well as through words (Roter, Frankel, Hall, & Sluyter, 2006). Voice tone can affect patients' perceptions of many aspects of a health care visit. A hurried or rushed tone can imply to the patient that the provider is either disinterested or short on time, which may affect how much patients are willing to disclose in the visit (Haskard, Williams, DiMatteo, Heritage, & Rosenthal, 2008; Nunes & Ayala, 2010). Similarly, because time is considered such a commodity in health care today, if patients feel rushed or that the health

provider does not have adequate time for them, they may infer that their visit lacks value or is less important than other patients' time or appointments. The same tone may translate to another patient as assertiveness or dominance on the part of the physician, creating a feeling of lack of control or involvement for the patient. Some researchers have found, though, that occasionally patients prefer their physicians' voice to express anxiety, distress, or immediacy, perhaps feeling that expression is a recognition of the seriousness or concern due the situation (Carter, Inui, Kukull, & Haigh, 1982; Hall, Roter, & Rand, 1981).

In the age of technology, it is not surprising that the use of electronic communication is being applied to medical adherence as well. There are now efforts to keep health reminders at the top of patients' minds through the use of email and text messaging (Davis & Hughes, 2008). Trial programs have been formed to send reminders to take medication, keep regular and vaccination appointments, and to recruit for and emphasize adherence during clinical trials of new drugs (Information communication technology: Mobile phones keep women with HIV in contact with care, 2007; Davis & Hughes, 2008; Kharbanda, Stockwell, Harrison, & Rickert, 2009). These technological tools may serve to support physicians' adherence requests and even act as additional forms of compliance gaining strategies.

Numerous studies indicate that communication training focused on adherence and compliance gaining strategies would be beneficial for health care workers (Burgoon et al., 1987; Burgoon et al, 1990; Mishra, Hansen, Sabroe, & Kafle, 2006; Street et al., 2009; Zolnierek & DiMatteo, 2009), but there is

relatively little on the feasibility of providing this training. Hutchinson and Wheeler (2006) studied the cost-effectiveness of behavior change communication training and verified that the programs are worthwhile, but different programs would need to be studied in-depth to measure the effectiveness gained as compared to the cost of the training. Because there are many different measures of adherence and strategies for communicating behavior change requests, individual assessments of each program would be necessary initially. Hutchinson and Wheeler also suggest formulating a standard by which all programs can be measured and then compared to one another. This standard would provide a consistent basis for all medical communication training that could be continually tested and re-tested for improvement of the programs.

Much of the existing literature focuses on the compliance gaining strategies used by physicians and on the outcome of those strategies. What is not addressed however, are the expectations patients have for the types of compliance gaining strategies they are likely to face going into a health care interactions or how patients will respond to those strategies. Because health care interactions are mutually influential, it would be helpful for providers to be aware of the kinds of compliance gaining strategies patients anticipate receiving when beginning a dialogue with them. Health care interactions can often be frightening for patients. Patients may be aware of behaviors they practice which are detrimental to their health, which could create feelings of guilt, apprehension, or even hostility. If patients anticipate their physician will recommend making a health related behavior change they are not prepared to make or do not wish to

make, and anticipate certain types persuasive strategies, they may preplan responses to providers' advice that will prohibit providers from being effective. This knowledge could provide health care workers with a chance to better formulate compliance gaining strategies and debate dissension or unwillingness to cooperate. This knowledge could also provide patients with an opportunity to be more competent in their health care communication. Therefore, the following research questions are proposed:

RQ<sub>1</sub>: Do patients anticipate specific compliance gaining strategies will be used by their doctors to get them to change a behavior? If so, what are the compliance gaining strategies patients anticipate doctors will use?

RQ<sub>2</sub>: How do patients perceive they will respond when physicians attempt to persuade them to change a behavior?

## Chapter Three: Method

### *Participants*

This study was based on a convenience sample. Participants for this study (n= 414) were 317 students enrolled in introductory communication courses at Marshall University in April, 2011, and 98 non-students recruited from groups or organizations of which faculty or staff of Marshall University were members. The student group consisted of 182 females and 135 males, and the non-student group consisted of 67 females and 27 males. Four participants did not register their gender. Of the total sample, 69.6% were between the ages of 18 and 23, 7.5% were between the ages of 24 and 29, 11.3% were between the ages of 30 and 49, 8.4% were between the ages of 50 and 64, and 2.7% were 65 years of age or older. The sample predominantly identified themselves as Caucasian at 80.5%, followed by Black at 9.9%, and other ethnicities such as Arab, Pacific Islander, Latino and Multiracial were identified with minimal representation.

In terms of highest educational level achieved, 15% of the total sample had only a high school degree, 65% of participants had attended some college courses but had not completed a degree and 10% had received an undergraduate degree. The remaining participants had attended training or technical school or had attempted or received a postgraduate degree. Most of the sample (n = 298) were single, representing 71.8 % of the participants. Married participants made up 16.1 % and the remaining participants reported that they were divorced, living with another, separated, or widowed. The sample

excluded anyone under the age of 18 years and no compensation was offered or given for participation in the study.

An examination of the two groups of participants showed that the student group was younger and less educated than the non-student group. In the student group, 288 (91.9%) of the respondents reported that they were in the age range of 18 and 23 years old and 28 (4.7%) reported being between the ages of 24 and 29. The remaining student respondents reported ages upward of 30 years old. Participants in the non-student group represented an older and broader range of ages; 16 (16.5%) were between the ages of 24 and 29 years, 35 (36.1%) were between the ages of 30 and 49, 34 (35.1%) were between the ages of 50 and 64 years of age, and 11 (11.3%) were older than 65 years. Only one respondent in the non-student group reported being between 18 and 23 years of age.

Turning to education, as would be expected, the student group reported that 95.9% had graduated high school or attended some undergraduate college classes. Of the remaining respondents, most reported they had attended some postgraduate classes or had attended a trade or vocational training program. The non-student group reported that 36.1% of the respondents had completed college degrees and 29.9% had attempted or completed a postgraduate degree, 22.7% reported that they had completed some undergraduate coursework, and 11.4% reported that they had either completed high school or attended a trade or vocational training program.

Additionally, the survey questioned respondents regarding their feelings about the health behavior they were considering while taking the survey. As this relates to their frame of mind when they considered their interaction with a physician, those results are included as well. More than half of the respondents were either planning to change the behavior (n = 97, 23.5%) or were actively engaged in changing the behavior already (n = 124, 30%). A quarter were considering changing the behavior (n = 104, 25.1%), and 8.2% had never considered changing the behavior (n = 34). An additional 12.8% (n = 53) noted that they had considered changing the behavior, but had decided not to change.

#### *Materials and Procedure*

After receiving approval from Marshall University's Institutional Review Board, data collection began. A paper copy of the survey was administered to students in introductory communication courses during class sessions by instructors. Students were informed that participation was voluntary and were given a copy of the consent form designated by Marshall University's Institutional Review Board to be used when research procedures were found to be exempt from review and the data would be collected anonymously. Students were instructed not to write their names or identifying information anywhere on the survey. Non-students were given a flyer at various meetings that directed them to the Marshall University Communication Studies' website where they would find a link that would give them access to an online form of the survey. The flyer contained the same consent form for exempted research with anonymous data collection procedures with additional information for internet respondents. Like

the paper and pencil survey used in classroom settings, the online survey did not ask for any identifying information and no record of participants' identifying information was collected electronically. The survey consisted of 11 questions (see Appendix A). The first six of the questions asked about respondents' anticipation of a physician's use of persuasive strategies to convince them to change a health behavior and their likely responses to those change attempts. The remaining five questions recorded demographic data.

Respondents were asked to imagine they had an appointment with a physician and think of a lifestyle practice they engaged in that could be detrimental to their health. The first survey question asked patients to characterize their feelings about changing the lifestyle practice by checking one of six responses that characterize the stages outlined by the Transtheoretical Stages of Change model (Prochaska & DiClemente, 1983) and its subsequent elaboration in the Precaution Adoption Model (Weinstein, Sandman, & Blalock, 2008). Possible responses included "I have never considered changing this behavior," "I considered changing this behavior but have decided to continue the behavior," "I am considering making a change in this behavior," "I am planning to change this behavior," or "I am currently changing this behavior."

The next two survey questions asked participants to acknowledge with a yes or no answer if they anticipated that their physician would address their health behavior at all, and if they believed their physician would attempt to persuade them to change or cease the behavior. Participants who did not believe their physician would address the behavior or attempt to persuade them to

change it were directed to the demographic questions. Those who did expect the physician would address or attempt to persuade them to change the behavior were then asked to check from a list of potential strategies the strategy they anticipated their physician would be most likely to use. Following that answer, participants were asked to check from a list of potential responses the one they believed they would use to respond to that strategy.

Persuasive strategies that patients were likely to anticipate physicians using to encourage them to change a lifestyle behavior were taken from work conducted in Burgoon et al.'s (1987) study regarding patient compliance and satisfaction. Burgoon et al. originally outlined 17 persuasive strategies used by physicians; however, some of the strategies provided low reliability. Following a factor analysis to explore the viability of the strategies being tested, Burgoon et al. identified six persuasive strategies that were reliable, including some person-centered strategies such as esteem or altruism, moral appeals, and expertise strategies. The six strategies included in the survey as possible methods physicians might use to influence patients included esteem, altercasting, self-feeling, altruism, moral appeal, and expertise. Esteem strategies involve using potential negative or positive regard by others to encourage compliance. Altercasting strategies cast the desired response or action in terms of what a "good" or responsible person would do. Self-feeling strategies imply that the individual will feel better or feel better about themselves if they comply with the request. Strategies incorporating altruism imply that complying with the request will meet some important need of the asker or someone close to the patient. A

moral appeal involves ethics and proposes that complying with the request is the only ethical response. Finally, expertise strategies emphasize that the physician's advanced knowledge indicates that compliance with the physician's suggestion will provide benefits for the patient.

The list of response strategies patients could select as their likely response to physicians' attempts to persuade them to alter a health related lifestyle behavior were taken from work conducted by van Servellen (2009) and Helm & Harrington (2004). Responses included placating or agreeing with the need for the change without actually agreeing to the request, actively agreeing to make the change, asking their physician for more information before deciding or agreeing to make the change, changing the subject in order to avoid having to respond to the physician's request, responding with open defiance to the request, ignoring the advice and giving the physician no acknowledgement at all, or passively agreeing with the advice even if the patient did not intend to comply.

## Chapter Four: Results

The first research question had two parts. The first part asked if participants anticipated that their physician would attempt to persuade them to change an unhealthy lifestyle behavior and 71% (n=294) of respondents said they would. The second question then asked if they anticipated that their physician would attempt to persuade them to change the behavior, and if so, to select from a list the strategy they anticipated their physician would use. As can be seen in Table 1, of respondents who thought their physician would try to persuade them to change their behavior, most of the respondents (48.1%) anticipated their physician would use an expertise based strategy, and nearly an equal number (19.5% and 18.8%, respectively), anticipated a self-feeling strategy or an altercasting strategy. The remaining three strategies were less anticipated, totaling fewer than 15% of responses.

Table 1

*Total Group Frequencies of Lifestyle Behavior Change Strategies Patients Anticipate Physicians Will Use*

Strategy	Frequency	Percent
Esteem	12	4.1
Altercasting	55	18.8
Self Feeling	57	19.5
Altruism	16	5.5
Moral Appeal	11	3.8
Expertise	141	48.1
Total	293	100.0

Recall that the data that resulted in the findings above were collected in two types of circumstances; some data were collected from college students in a classroom setting using a paper and pencil questionnaire, and some data were collected from adult members of community groups who linked to the survey via the Communication Studies webpage. Because the second group was older and more highly educated, it was decided to examine the responses of the two groups separately to discover whether the non-student and student groups were significantly different from one another.

To explore the possibility that the two groups differ in their expectations about physicians' compliance gaining strategies, a chi-square test of independence was performed. Looking at the two groups of respondents' expectations about physicians' behavior change strategies, a statistically significant difference was found for the physicians' compliance gaining strategies anticipated by the student group and the non-student group ( $\chi^2 = 23.17$ ;  $p = .001$ ). As can be seen in Table 2, the strategies in which the differences in student and non-student expectations could be seen were in the self-feeling strategy, which non-students reported anticipating only 6.4% of the time and the student group reported anticipating 24.1% of the time and the use of an expertise strategy, which students anticipated 41.3% of the time and non-students anticipated 60.6% of the time.

Table 2

*Crosstabulation of Student and Non-Student Groups and Lifestyle Behavior Change Strategies Anticipated*

Strategy	Students	Non-Students
Esteem	8 (3.7%)	4 (5.1%)
Altercasting	40 (18.6%)	15 (19.2%)
Self Feeling	52 (24.2%)	5 (6.4%)
Altruism	14 (6.5%)	2 (2.5%)
Moral Appeal	11 (5.1%)	0 (0.0%)
Expertise	89 (41.4%)	52 (66.7%)
Total	215	78

Research question 2 asked how respondents anticipated they would respond to the physician’s persuasive strategy. As can be seen in Table 3, in response to this question, 53.9% responded that they would agree with their physician and would try to make the behavior change, 16% responded that they would ask their physician for more information and tell their physician that they would consider making the change, 10.6% reported that they would agree to appease the physician, even if they did not intend to make the change, and 7.8% reported that they would not argue with their physician but would not agree to follow the physician’s advice. The remaining 11% of responses were spread across the remaining five response strategies.

Table 3

*Total Group Frequencies of Patient Anticipated Response to Physicians  
Persuasive Efforts*

Response	Frequency	Percent
Explanation of inability to comply	7	2.4
Explanation of lack of need to comply	5	1.7
Actively agreeing to make the behavior change	158	53.9
Placating	31	10.6
Requesting information prior to deciding/agreeing	47	16.0
Change subject	2	.7
Defiance	2	.7
No acknowledgement	6	2.0
Passive agreement	23	7.8
Other.	11	3.8
Total	293	100

Again, responses from the two groups of participants were examined separately to discover whether the non-student and student groups were significantly different from one another. To explore the possibility that the two groups differed in their expectations about how they would respond to physicians' compliance gaining strategies, a chi-square test of independence was performed. Looking at the two groups of respondents' beliefs about their likely response, a statistically significant difference was not found for the response to physicians' compliance gaining strategies anticipated by the student group and the non-student group ( $\chi^2 = 12.51$ ;  $p=.252$ ). Student responses were similar to non-student responses (Table 4) though it is notable that the only respondents who would explain to the physician their lack of need to comply or respond with open defiance came from the student group. Those in the non-student group were

more likely than the student group to change the subject, give no acknowledgement or give passive agreement to their physician.

Table 4

*Crosstabulation of Student and Non-Student Groups and Response to Physician Persuasive Strategy*

Response	Students	Non-Students
Explanation of inability to comply	5	2
Explanation of lack of need to comply	5	0
Actively agreeing to make the behavior change	121	37
Placating	23	8
Requesting information prior to deciding/agreeing	33	14
Change subject	0	2
Defiance	2	0
No acknowledgement	3	3
Passive agreement	15	8
Other. Please describe:	7	4
Total	215	78

Because previous studies in compliance gaining have consistently identified gender differences in the types of compliance gaining strategies used and preferred by men and women, a chi-square test of independence was also performed to examine potential gender differences in preferences in expectations about physician's persuasion strategies. A marginally statistically significant difference was found for responses men and the women believed they would use ( $\chi^2 = 12.53$ ;  $p = .051$ ), as can be seen in Table 5.

Females anticipated an expertise appeal (50.5%) more often than males (42.5%). Females also anticipated physicians would use a self-feeling appeal (21.9%) more often than males (15.7%). Males anticipated an altercasting strategy (22.2%) more often than females.

Table 5

*Crosstabulation of Gender and Lifestyle Behavior Change Strategies Anticipated*

Strategy	Males	Females
Esteem	9 (8.3%)	3 (1.6%)
Altercasting	24 (22.2%)	31 (17.0%)
Self Feeling	17 (15.7%)	40 (22.0%)
Altruism	6 (5.5%)	10 (5.5%)
Moral Appeal	6 (5.5%)	5 (2.7%)
Expertise	46 (42.6%)	92 (50.5%)
Total	108	182

Just as men and women anticipated different strategies to be used by physicians, there may also be a difference in responses they anticipate giving to physicians. To analyze this difference a chi-square test of independence was also performed to examine potential gender differences in anticipated response to physicians' persuasive attempts. Looking at the two groups, a statistically significant difference was found for the response to physicians' compliance gaining strategies anticipated by the males group and females ( $\chi^2 = 18.35$ ;  $p=.049$ ). As seen in Table 6 males reported using placating or passive agreement responses (13.8% and 11% respectively) more often than females 8.8% and 5.5%). Females reported higher rates of active agreement (55.8%) than males (50.5%). A notable difference is that males were twice as likely as females to explain to the physician why they could not or did not need to comply with physicians' persuasive attempts.

Table 6

*Crosstabulation of Gender and Response to Physician Persuasive Strategy*

Response	Males	Females
Explanation of inability to comply	4 (3.6%)	3 (1.7%)
Explanation of lack of need to comply	4 (3.6%)	1 (<1.0%)
Actively agreeing to make the behavior change	55 (50.5%)	101 (55.8%)
Placating	15 (13.8%)	16 (8.8%)
Requesting information prior to deciding/agreeing	12 (11.0%)	35 (19.3%)
Change subject	1 (1.0%)	1 (<1.0%)
Defiance	2 (1.8%)	0 (0.0%)
No acknowledgement	2 (1.8%)	4 (2.2%)
Passive agreement	12 (11.0%)	10 (5.5%)
Other.	2 (1.8%)	9 (5.0%)
Total	109	181

Finally, because it may be helpful to communication scholars who guide physicians' and other providers' development of patient centered skills, an additional analysis was computed to further explore these findings. Specifically, a chi-square test of independence was performed to examine the relationship between expected persuasive strategy used by physician and response anticipated. Comparison of strategy expected and anticipated response to strategy for the entire group (n=290) identified differences that were statistically significant ( $\chi^2 = 373.95$ ;  $p=.000$ ). Turning to an examination of Table 7, the strategies of altercasting (11%), self-feeling (12.4%), and expertise (25.1%) were most notably associated with the respondent anticipating agreeing and

attempting to make the change requested. The expertise strategy was also related (8%) with requesting more information from the physician before deciding to make the change.

Table 7

*Crosstabulation of Patient Anticipated Strategy and Response*

	Esteem	Altercasting	Self- feeling	Altruism	Moral Appeal	Expertise	Total
Explanation of inability to comply	2	1	0	0	1	3	7
Explanation of lack of need to comply	2	1	0	1	1	0	5
Actively agreeing to make the behavior change	3	32	36	10	3	73	157
Placating	1	5	5	2	1	17	31
Requesting information prior to deciding/agreeing	0	9	10	3	2	23	47
Change subject	1	0	0	0	0	1	2
Defiance	0	0	0	0	0	2	2
No acknowledgement	0	2	0	0	0	4	6
Passive agreement	3	2	6	0	3	9	23
Other	1	2	0	0	0	9	11
Total	12	54	57	16	11	141	292

## Chapter Five: Discussion

The results of this study indicate that patients do go into interactions with their health care provider anticipating that their provider will attempt to persuade them to change unhealthy lifestyle behavior. Further, most respondents who anticipate that their physician will attempt to persuade them to change a behavior anticipate they will comply and attempt to make the change. This finding is promising in that it shows that most patients expect to be told how they can take better care of their health and plan to implement changes to do so. If this is a normal response, though, it suggests that, if physicians and other providers would take the time to talk with patients about making lifestyle behavior changes, patients would be more likely to adhere and their overall health would like improve as a result. It may be that patients are eager to improve their health and will agree with physician recommendations but fail to follow through with those recommendations.

This study further indicates that patients anticipate that health care professionals will most often use expertise strategies to gain compliance. Considering that Burgoon, et al. (1987) noted that positive expertise strategies left patients with an increased perception of relational connection to their health care providers, expertise would seem to be an effective method of gaining compliance. However, negative expertise appeals have been shown to alienate patients. In this study, it is important to note that the effect of the strategy chosen by the physician will be impacted by how he or she wields it.

Also anticipated were strategies incorporating self-feeling or altercasting. As self-feeling strategies emphasize how the health behavior change will positively affect or impact the patient, anticipation of these strategies could be tied to which benefits are presented to the patients for changing the behavior. Klingle (1993), noted that when patients perceive they will see or feel benefits relatively quickly, they will be more likely to adhere. It may be that the benefits to self are introduced in ways that make them seem attainable to patients. The student group reported anticipating self-feeling strategies more often than the non-student group. As self-feeling relates to how the patient will respond to the behavior change rather than focusing on the physician's knowledge about the behavior change and benefits, self-feeling seems to be related to patient centered communication, focusing on the patient rather than being strictly led by the physician. The student group overall tended to be younger than the non-student group, which may point to health care providers' increased use of collaborative communication with collaborative strategies being more normal and anticipated by younger adults.

The altercasting strategy was anticipated more often by males in the study than females. Altercasting involves strategies that suggest following the advice is what a good or reasonable person would do. Verbrugge (1982) noted that men and women have different expectations in terms of illness and their perceptions of symptoms and their intentions to take measures to solve or prevent health problems. It may be that men tend to perceive maintaining their health to be their responsibility or an expectation that is placed on them more than women, who

anticipated an expertise strategy. In this, women may perceive that the physician, or expert, is in the position to advise them on what health behaviors are appropriate.

Again, it is promising that 69.9% of respondents asserted that they would agree with their physician's advice and would try to implement suggested changes or that they would ask for additional information to consider making the change. This result implies that if patients do not comply with physicians' requests, it may be due to extenuating factors that influence them after their interaction with their physician. Because of this, it supports the need for collaborative communication between physicians and patients, to discuss barriers to making the recommended changes or difficulties they may encounter when trying to make the changes.

It is concerning that 18.4% of respondents noted that they would respond to the physician either with a placating response or by passively agreeing without commitment. This result implies that these patients are either not interested in acting proactively to improve their health or that they are not engaged in their interaction with their health care provider. If the latter is the case, both physician and patient could benefit from the physician changing strategies in order to find a method which will engage the patient. Placating or giving passive agreement with no actual commitment may be categories of responses that physicians would be wise to recognize and address.

In comparing expected strategies with how respondents anticipated replying to physicians, the strategies of expertise, altercasting and self-feeling

were all related with respondents anticipating agreeing and attempting to comply with the physician's request. To a lesser degree, though, expertise strategies were also related to asking for more information before agreeing to make a recommended change. This finding not only supports Burgoon et al.'s (1987) findings that expertise strategies can be effective in promoting relational communication, but also supports assertions by Roter and Hall (1992) that patients want to be active participants in their health care decisions.

Interestingly, responses of defiance, not acknowledging the physician's request, and passive agreement with no intention of actually complying were most often chosen in response to expertise strategies. Although these responses represented a small portion of the sample, the responses support Burgoon et al.'s (1987) assertion that expertise strategies can have negative results as well.

It is important to note that most of the respondents were either changing or planning to change the behavior already. Being in these stages of change may make them more open to or expectant of persuasive strategies on the part of their physician. When considering the stages of change that respondents reported they were in regarding the health behavior they were thinking of for the survey, 78.7% reported they were either considering, planning, or actively changing the behavior already. Being in those stages of change may affect their responses to physicians' attempts at persuasion because they were already aware of and interested in changing the behavior. The remaining 21.3%, however, reported that they had either decided to continue the behavior or had never considered changing it. Because these respondents were not already in a

frame of mind to change unhealthy behaviors, physicians may need to approach them in a different manner, educating them along with recommending changes.

There are several limitations to this study. Because a convenience sample was used, the results cannot be generalized to a larger population. The findings can be used, however, to justify a larger study with a sample that does allow generalization. As well, three-quarters of the respondents of the survey were students, most of them between the ages of 18 and 23. These respondents may be taking responsibility for their health care for the first time in their lives. They may not be as experienced with interacting with their physician as the older group, and if their previous interactions with health care providers may have included their parents. This factor may affect their perceptions of health care interactions as their physician may have been directing persuasive strategies toward their parents instead of the students. Although this study provides valuable information about what persuasive strategies participants anticipated from physicians and how they would respond, it did not take into account those respondents who said they thought their physician would not ask about their health behavior or would not attempt to persuade them to change it. Those who do not anticipate their physician would attempt to persuade them to change a behavior may be a better audience to study to learn what types of strategies may be used most effectively to persuade them to change the unhealthy lifestyle behavior.

As this study provides valuable information regarding how patients anticipate physicians will communicate with them and how they will respond, it

also provides direction for future research. Most of the respondents anticipated that their physician would attempt to persuade them to change unhealthy behaviors and were open to accepting the advice and making the change, but previous literature indicates adherence rates are low. These contradictions suggest the benefit of additional research into what causes those who plan to change not to follow through. Additionally, research focusing on those who do not believe their physician will address or attempt to persuade them to change unhealthy behaviors could provide valuable knowledge about how physicians can best introduce the idea of making the change to them.

The quality of patient-physician communication impacts patients' willingness to follow a physician's advice regarding improvement or maintenance of their health. Further research geared toward understanding how that communication can be more successful and effective in encouraging patient adherence is warranted.

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## Appendix

## Appendix A

### Health Survey Questionnaire

Imagine that you have an appointment with your doctor for your annual checkup. You are aware that you engage in some lifestyle practices that may not be good for you or that may even cause serious health concerns at some point in the future. (For example, you need to stop smoking, need to lose weight and/or exercise more often, control your cholesterol levels, lower your blood pressure, practice safer sex, or other things). As you answer the questions below, please think of ONE lifestyle practice you believe your doctor would like you to change and answer all the questions with that practice in mind.

1. How would you characterize your feelings about changing this health behavior?

*Check one*

- I have never considered changing this behavior.
- I considered changing this behavior but have decided to continue the behavior.
- I am considering making a change in this behavior.
- I am planning to change this behavior.
- I am currently changing this behavior.

2. When you go for your medical appointment, do you anticipate that your doctor will ask you about the health behaviors you engage in?

*Check one*

- Yes
- No

If Yes, proceed to the following question. If no, proceed to question 6.

3. Do you think your doctor will try to persuade you to change the unhealthy behavior?

*Check one*

- Yes
- No

If Yes, proceed to the following question. If no, proceed to question 6.

4. What strategy do you think your doctor will use to persuade you to change the unhealthy behavior?

*Check one*

- Your doctor might say to you that people you value will think better of you if you change or stop this unhealthy behavior and worse of you if you don't.
- Your doctor might tell you that if you were responsible or concerned about your health, you would change this unhealthy behavior.
- Your doctor might tell you that you will feel better about yourself if you change or stop this behavior and/or you will feel worse about yourself if you don't change your behavior.
- Your doctor might say to you that your family or loved ones need you to change or stop this behavior, so do it for them.
- Your doctor might tell you that the only ethical thing to do is to change or stop this behavior.
- Your doctor might say to you that he/she knows from experience that changing or stopping the unhealthy behavior will benefit you and you'll enjoy better health, and that your health is at risk if you don't change or stop the unhealthy behavior.

5. If your doctor tried to persuade you to change the unhealthy behavior, how would you respond?

*Check only the one answer that best represents what you would do:*

- I would explain to doctor why I cannot make the change at this time.
- I would tell the doctor why I do not need to make the change.
- I would agree and try to make the behavior change.
- I would agree to appease the doctor, even if I didn't plan to make the change.
- I would ask my doctor for more information and tell him/her that I would consider making the change.
- I would change the subject to another topic in order to avoid agreeing or disagreeing.
- I would openly tell my doctor that I do not intend to change.
- I would not respond; I would be silent.

- I would not argue and would agree with the advice, but I would not say that I would follow it.
- Other. Please describe:

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6. When you answered the questions above, were thinking about
- A doctor you have a long-term relationship with?
  - A doctor you have only seen a few times?
  - A doctor you have just met?

7. What is your gender?

- Male
- Female

8. What is your age?

- 18 – 23 years old
- 23-29 years old
- 30 – 49 years old
- 50 – 64 years old
- 65 years and older

9. What is the highest level of education you have completed?

- some high school
- high school graduate
- some college
- trade/technical/vocational training
- college graduate
- some postgraduate work
- postgraduate degree

10. How would you classify your ethnicity?

- Arab
- Asian/Pacific Islander
- Black

- Caucasian/White
- Hispanic
- Indigenous or Aboriginal
- Latino
- Multiracial
- Would rather not say
- Other : \_\_\_\_\_

11. What is your current marital status?

- Divorced
- Living with another
- Married
- Separated
- Single
- Widowed
- Would rather not say

## Appendix B



Office of Research Integrity  
Institutional Review Board  
401 11th St., Suite 1300  
Huntington, WV 25701

FWA 00002704

IRB1 #00002205  
IRB2 #00003206

March 24, 2011

Cynthia Torppa, PhD, MA, BA  
Communication Studies Department

RE: IRBNet ID# 224826-1

At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Torppa:

<b>Protocol Title:</b>	[224826-1] Patient Perspectives of Compliance Gaining Strategies Used in Health Care Interactions	
<b>Expiration Date:</b>	March 24, 2012	
<b>Site Location:</b>	MU	
<b>Type of Change:</b>	New Project	APPROVED
<b>Review Type:</b>	Exempt Review	

In accordance with 45CFR46.101(b)(2), the above study and informed consent were granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Vice Chair for the period of 12 months. The approval will expire March 24, 2012. A continuing review request for this study must be submitted no later than 30 days prior to the expiration date.

This study is for student Margaret Lambert.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/Behavioral) Coordinator Bruce Day, CIP at (304) 696-4303 or [day50@marshall.edu](mailto:day50@marshall.edu). Please include your study title and reference number in all correspondence with this office.