

The Effect of Privacy Management and Immediacy on Patient Compliance

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## **Chapter I**

### **Introduction**

Patient compliance is an important outcome of effective patient and provider interaction. There are many different ways to define compliance. This study focused on how a patient adheres to a provider's medical recommendations and directives. The most widely early accepted definition of compliance comes from Haynes and Taylor (1979) who state that compliance is "the extent to which a person's behavior in terms of taking medications, following diets or executing other lifestyle changes coincides with medical or health advice" (p.1). Patients who are compliant will likely enjoy a more positive outcome of interaction with their provider, better health outcomes, and a higher level of trust. The term compliance for many signifies an underlying authoritarian tone on the part of the health care givers and a yielding submission by clients (Simmons, 1992). Patient compliance can be viewed as an attitude and as a behavior (Cameron C., 1996). Compliance as an attitude is willingness or intention to follow health prescriptions. Compliance as a behavior is related to the actual carrying out of prescriptions (Davis, 1968) or instructions.

Patient compliance could be better facilitated by two constructs: immediacy and disclosure. Immediacy is the degree of perceived physical or psychological closeness one feels for another (Mehrabian A., 1967). These are usually sets of behaviors which communicate social accessibility (Goffman , 1964). Disclosure is the act of revealing personal information about oneself to another (Collins & Miller, 1994, p. 457). Disclosure should play a large role in a patient's ability to comply because disclosure of information helps a provider understand the health care needs of the patient. Overcoming

possible barriers of non-disclosure and non-immediate behavior, the patient can be more fully equipped to communicate effectively, thus ensuring the optimal health care being given and received. Applying immediacy and disclosure to this study will help to understand how a patient can be encouraged to be more compliant.

Communication Privacy Management theory created by Dr. Sandra Petronio (Petronio, 2004) will be introduced and will acknowledge how patients disclose information to their provider within the communication interaction. It is the goal of this study to further the research on the patient-provider interaction using Petronio's communication privacy management theory, to provide a framework for effective patient-provider communication by looking at levels of immediacy and disclosure within the patient-provider interaction. Immediacy and disclosure should go together when understanding the construct of patient compliance because patients should feel comfortable with disclosing information to their provider and not holding back on personal boundaries. CPM explains that the more information a patient discloses to a co-owner (a provider) the more information a patient will receive back to become compliant to a regimen given by a provider.

## **Chapter II**

### **Literature Review**

#### *Communication Privacy Management Theory*

There is research applying Communication Privacy Management CPM that explores privacy within face-to-face interactions (Petronio, 2010). CPM is a dialectical theory asserting that privacy management depends on realizing people have both protection of their own information needs and access needs for social connectedness (Child, Petronio, Agyeman-Budu & Westermann, 2011). CPM theory makes the assumption that the strength of ownership of personal information influences the degree to which a person considers the information private and how access is influenced. There are three main principles for managing and revealing and concealing private information (Child et al., 2011, p. 2019). The first principle is privacy ownership. Privacy ownership occurs when a person believes their private information belongs to them. Even after giving permission to others to know information, others then become co-owners; the original owner of the information still believes that they remain the sole proprietor of the information. The second principle is privacy control. Privacy control happens when people believe that they have the right to control who knows about the private information and the general flow of the private information. For example, a patient makes the choice of who is allowed to become a co-owner of the information. The third principle predicts that when a lack of coordination between and the original owner and co-owners occurs, privacy turbulence or breakdowns happen. This happens when information is leaked out to un-authorized others. Owners of the information could

potentially fix privacy turbulence by changing the rules of negotiating new terms of management with the co-owner.

### *Disclosure*

Disclosure should be the primary force of CPM. Disclosure is one of the most researched topics in social sciences (Preist & Dominick, 1994). At the same time, research on effective communication between patient-provider interactions has not been magnified to understand how disclosure plays a role in patient compliance. People have investigated disclosure by examining criteria such as amount, honesty and accuracy, valence, degree of intent, and depth (Tardy, Hosman, & Bradac, 1981). Disclosure should play a large role in how a patient and a provider communicate health care issues with one another. Both parties could be cautious of disclosing information due to the possibility of embarrassment when speaking on certain topics. With regard to gender differences, there could be a difference in the interpersonal style of women compared to men (Roter, Hall, & Aoki, 2002). Studies suggest that women disclose more information about themselves in conversation (Dindia, 1992). Another study showed that women show a warmer more involved style of nonverbal communication (Hall, 1984).

Disclosure within the medical interview or patient-provider interaction could be a situation clouded by uncertainty, anxiety, and embarrassment from the patient. Both parties could have their own set of worries, emotions, and agendas that can interfere with the effectiveness of the interaction. One example could be how providers communicate directly with the patient. A study found that doctors often feel that they are being friendly towards their patients when in fact patients do not have the same impression of the same

interaction (Gorovitz, 1982). To overcome this problem Niven (1990) has suggested the use of interpersonal skills training in relation to gaining patient compliance through disclosure. For example, a provider can smile more to create a more positive feeling for a patient to disclose information.

Actors apply rules for granting the recipient access to the information they are disclosing within the interaction (Allman, 1998). Patients and providers need to be aware of these rules in order to achieve effective communication within the health care interaction. According to Petronio, (2002) gender, situational factors, motivational or personality factors, and cultural issues are the basis for rule making when disclosing information (Petronio, 2002). This is not uncommon among some providers due to personal beliefs, region, culture and degree of quality of practice they perceive.

“Disclosure takes on many forms” (Goldstein, 1994, p. 419). For example, a provider who is wearing a ring on the ring finger of the left hand could be presenting disclosure (e.g., being married) to anyone who sees he/or she wearing a ring. This could create conversation which could encourage patient disclosure if they have the same meaning in common. Another example of a provider disclosing information could be how the provider’s office is decorated. If a patient walks into an office seeing photos on the wall of his or her provider with children in Africa, this could suggest that they are doing volunteer work for a church or organization in which a patient could have the same interest. But it should be left to providers to control the amount of information they disclose about themselves to patients. Disclosure could be used as a mechanism for allowing or restricting the access to personal information by another person. Deciding

whether or not to disclose information presents uncertainty for a patient. Disclosure serves numerous positive relational as well as individual functions such as understanding difference of outcomes (Festinger, 1957).

### *Causes of Low Disclosure*

Boundaries can expand or change, and private information can belong to more than one person; such change occurs commonly within the patient and provider interaction (Petronio, 2002). The reliability or how comfortable a patient feels when disclosing information is an example of how boundaries can expand or change. Furthermore, there are six main causes for low disclosure: negative evaluations, loss of self-esteem, loss of control over a situation, “hurt” for the recipient of the disclosure, projection of a negative image, and the great lie theory, in which the lie is presumed to have a greater benefit than truthful disclosure (Steele, 1975). By understanding Steele’s six main causes for low disclosure both a patient and provider can become more aware of what types of communication to avoid. For example, when a patient meets with a provider, there may be other health caregivers involved in the interaction such as nurses and receptionists. The interaction can be linear in format; first, a patient fills out paperwork instructed by the receptionist, then a patient meets with a registered nurse to have vitals taken and be asked preliminary questions, next a patient meets with a physician’s assistant who proceeds with the majority of the visit. The PA predominantly follows the biomedical model of communication in which he/she asks questions strictly about the patient’s symptoms to help a provider gain a better understanding of the situation. Only after these preliminary interactions are accounted for does a patient finally

meet with a provider. This type of interaction from a patient's perspective could be frustrating and tiresome. Not only is it frustrating, but a patient could potentially cease disclosure due to the long process they have to endure just to get to see a provider.

From the patient's perspective, having to disclose information repeatedly to too many different people can limit disclosure and can end all possibility of effective patient-provider communication. A study done by Davis (1968) shows that the majority of patients who had a first time visit with their provider felt that the information being asked by many providers confused the patient and created a deviant behavior when the provider pushed the issue of compliance upon the patient (Davis, 1968). Another example of positive or negative effects on patient compliance and privacy management comes from Gillum and Barsky (1974), who found that two-thirds of physicians attributed the problem of poor compliance to their patients' uncooperative personality and only one-quarter thought that the physicians themselves might be responsible (Gillum & Barsky, 1974). A provider can help with disclosure issues by improving and showing sensitivity to a patient's verbal and non-verbal communication, and sympathy with and understanding of a patient's feelings, which in return will promote compliance.

Allman (1998, 2009) states that the theory of boundary management creates metaphoric protective boundaries that individuals can use to manage the flow of private information from self to others, and that self-disclosure is the means by which individuals manage these personal boundaries (Allman, 1998). Self-disclosure is not always valued. "Disclosing all information could indeed be painful for both the person revealing and the recipient" (Petronio, 2004, p. 197). For example, if a patient approaches a provider with

an embarrassing medical issue, that patient might restrict how much he or she discloses about the symptoms. Without access to this restricted information, the provider is less able to diagnose or properly treat the patient (Petronio, 2006). If there is enough immediacy and disclosure given by a provider, compliance might be more likely. Petronio's Communication Privacy Management (CPM) Theory will be used to analyze the patient interaction in order to provide a framework where successful patient interaction can occur.

Petronio (2004) defines disclosure in terms of managing privacy or how individuals control access to private information. Accepting the term "Disclosure" instead of "Self-Disclosure" leaves a more simple understanding than self-disclosure, because self-disclosure digs deeper into more branches of revealing personal information on different levels such as a traumatic experience, environment, education, understanding, language barriers, etc. (Petronio, 2011). Removing the barriers that are created through embarrassment or lack of understanding could lead to a better healthcare encounter for patients "Control is also important because people feel they have the right to determine what happens to their private information" (Petronio, 2004, p. 202). Communication Privacy Management Theory allows for a patient involved in the interaction to be consciously aware of their own control of information. For example, a patient and a provider can find a common ground such as a similar personal interest to make a connection of understanding one another a little better. Three related dimensions define boundary Structures. These are permeability, ownership, and linkages (Petronio, 2000). Permeability rules refer to the amount, breadth, and depth of disclosure, ownership

rules capture the extent to which the original owner of private information assumes that co-owners have control to make independent decisions about further disclosure of private information, and linkage rules identify who else should be privy to private information (Child, Pearson, & Petronio, 2009). Once effective communication and understanding is established by following the three dimension rules, health problems can be more easily addressed with this study. Communication privacy management helps to explain the importance of how patients perceive compliance or noncompliance to the regimen given by their provider through understanding privacy management strategies. Although individuals set the parameters of disclosure, the decision to reveal or maintain information remains with its owner (Wheless L., 1976).

Permeability is a mindset of how a patient feels about who they disclose information to, how much information they disclose and how often they will give information. Depending on the background of a patient, a patient decides on whom they disclose information to base on how comfortable a patient feels while speaking to someone. A personality clash could potentially lead to low amounts of divulging information to a co-owner.

A patient could see information as highly secured information which makes them the sole owner of the information. A patient could regulate the disclosure of information to a co-owner depending on how they trust the co-owner handling private information of a patient. If a patient doesn't feel comfortable linking private information to someone else, a patient might re-evaluate disclosure of that information with a co-owner.

The regulation of the privacy structures is guided by a rule management system (Golish & Caughlin, 2002). Golish and Caughlin (2002) contended that privacy separates all individuals and that boundary structures are different in the way of permeability or how much information is allowed to pass through the boundaries that are set up. For example, there is a patient-provider information co-ownership (Petronio & Sweeney Lewis, 2011). A provider, being the co-owner of patient information, is a gate-keeper to patient information if a link has to be made by referring a patient to another provider (Petronio & Sweeney Lewis, 2011). Providers, being co-owners of patient information, play three roles: (1) they interpret the message given by a patient, (2) are carriers of a message about information such as lab results, and (3) deliver the message to the patient (Petronio & Sweeney Lewis, 2011). In most cases, the provider is in control as both first and last speaker in each exchange of communication with a patient (Mishler, 1984). Usually a doctor is the one who creates the developing topic of talk by asking a series of medical questions which a patient might feel disconnected to which keeps a patient from playing a role in maintaining an equal conversational flow. Mishler gives an explanation of why a provider creates this type of conversation; it is because providers speak from medical terminology which relies exclusively on the biomedical model of communication. This model strips the framework of communication on the level of the patient (Mishler, 1984). A patient can view this type of communication as a provider ignoring their background, medical history, or what goes on in their everyday lives and could feel a threat to personal identity and perceptions of being dehumanized, stereotyped, and undervalued. Perceptions and behaviors are filtered through the self-

system and mediated by a sense of who we are and what it means to be that type of person which forms boundary rules for a patient or a provider (Lambert, Street, Cegala, Smith, Kurtz, & Schofield, 1997).

In keeping with the purpose of this study, Communication Privacy Management Theory can help to explain how attitudes perceived from a patient can lead to more effective communication with a provider, which could lead to compliant behavior. The social and psychological factors thought to influence compliance are identified: (a) knowledge and understanding including communication, (b) quality of the interaction including the patient-provider relationship and patient satisfaction, (c) social isolation and social support including the effect of the family, (d) health beliefs and attitudes—health belief model variables, and (e) factors associated with the illness and the treatment including the duration and the complexity of the regimen (Cameron C. , 1996)

Communication Privacy Management Theory says that some information will not be passed between a patient and a provider because of certain boundaries each may have (Petronio, reeder, Hecht, & Mon't Ros-Mendoza, 1996). One of the goals of healthcare, according to Weiner et al. (2005), is that care should be provided in the context of family and community or whole person care. By looking at a patient as a whole package and not just looking at the physical symptoms, a provider can make assumptions about patient boundaries and possibly overcome the boundaries to engage in higher quality communication. There are steps that can be taken in order to limit the boundaries of privacy a patient might manage. A provider could undergo training for effective communication with their patients. A provider also has to help keep the integrity of the

network and communication between provider and patient. Weiner, Barnet, Cheng and Daaleman (2005) back this statement with a suggestion to produce effective communication in healthcare by having a provider be the one keeping integrity of communication between a patient and a provider. Without making disclosure a primary force of CPM, the possibility of patient non-compliance could occur.

### *Patient Non-compliance*

Patient non-compliance occur when a person's behavior does not coincide with medical or health advice (Conrad, 1985). Non-compliance is a significant problem and a major challenge for providers (Cameron, 1996). Although physicians might be increasingly aware that non-compliance is a significant public health problem, individuals might decide not to be compliant without what they think is a good reason (Kirscht, Eracker, & Becker, 1984). In other words, a patient could be fishing for a positive outcome before revealing non-compliance to help them feel re-assured that they are comfortable with how the co-owner will treat the private information.

Physicians have great difficulty identifying and dealing with noncompliant patients. Gillum and Barsky (1974) state that the factors most consistently related to noncompliance are (1) psychological factors, which might relate to a previous experience (2) environmental and social factors, such as cultural surroundings (3) characteristics of the therapeutic regimen, which could be how a patient would not want treatment for an ailment and (4) properties of the physician-patient interaction, meaning the boundaries which the patient and provider have (Gillum & Barsky, 1974). Non-compliance is a significant problem in all patient populations, from children to the elderly. It applies to

nearly all chronic disease states and settings, and shows to get worse the longer the regimen is carried out (Morris & Schulz, 1992). Compliance should be important since it is directly related to the prognosis of the illness. Without compliance, goals cannot be achieved, resulting in poorer patient outcomes.

### *Patient Compliance*

Further research is needed to provide more conclusive results into the factors involved in patient compliance and to test the effectiveness of compliance enhancing strategies. Medical terminology could be confusing to a patient. Speaking in terms of medical terminology could reflect a technical interest and expresses a “scientific attitude”. “The meaning of events is provided through abstract rules that serve to decontextualize events, to remove them from particular personal and social contexts” (Mishler, 1984, p.104). This could lead to a patient not understanding why they need to be compliant with a regimen given by a provider. Because medical terminology is used in a purely scientific context and has no hidden agendas it could be easier for a provider to understand the medical problems of the patient. However, when providers are dealing with patients, medical terminology operates on a number of distorted assumptions for a patient.

Changes in our health care system over the years have made interpersonal relationships difficult to maintain between a patient and a provider (Saultz & Albedaiwi, 2004). This could impact how a patient responds within the interaction with a provider. One example of the difficulty creating interpersonal relationships between a patient and a provider is the amount of time a patient is given during a visit. Depending on the type of

issue a patient has, depends on the amount of time a patient is scheduled to have with a provider. If it is a minor issue, a patient could only have fifteen minutes in an appointment, and only 5 of those minutes are actually spent with a provider. The other ten minutes could be with a nurse taking vital signs and charting information.

The way a patient perceives the ability to change or control their lives has a major impact on their willingness or ability to comply with treatment. It is more difficult for a provider to modify health beliefs compared with some of the other factors influencing compliance. Low compliance to therapeutic regimens could have a serious impact on patient health because a patient could potentially tell their provider they are following through with their regimen when they are not (Christensen, et al., 2009). A Patient who is non-compliant with a prescribed regimen could result in destabilization of health and increase the cause of sickness (van der Wal, Jaarsma, & van Veldhuisen, 2005).

A patient should be provided with information regarding benefits of various health actions and be helped to select the action with the highest probability of success. This would increase a patient's realistic perception of the effects of the regimen and the benefits of taking action will enhance compliance (Mikhail, 1981). A study done by Wrench and Booth-Butterfield (2003) showed that a patient is more likely to be compliant with a provider who gives arguments for prescribed treatments when compared to those physicians who merely try to reinforce positive behavior (Wrench & Booth-Butterfield, 2003). This can help reduce anxiety and promote a patient to speak more openly to a provider about compliance.

Sometimes patient compliance with a medical treatment can be enhanced if a provider engages a patient as an active participant in their care (Groopman, 2007b). Patient compliance should be noted as a major building block of healthcare success. If a patient feels like they are connected to a provider, the level of trust, respect and guidance could rise to higher levels of self-disclosure and immediacy, which could result in greater compliance to a regimen.

A provider should motivate a patient to make his or her own decisions in ways to enhance understanding, which in turn could increase patient compliance. The healthcare professional understands the regimen in terms of the way it will affect a patient's health (Cameron & Gregor, 1987). Another consideration in encouraging disclosure from a patient is for a provider to determine from a patient, if a patient understood the message. A patient should be exposed to the message more than once but not a great number of times (Skilbeck et al., 1977). Another study performed by The American Association of Retired Persons (1992) concluded that a provider who is friendly and respectful to a patient, received higher ratings in patient satisfaction than a provider who was less friendly but had the same credentials. Obviously an important factor for patient compliance is patient satisfaction. If patient satisfaction is high and the recommended actions are specific, then the arousal of immediacy from the patient may be successful in achieving compliance. We can use CPM and all of its components to attack a number of problems which one is patient non-compliance. If a patient can open up boundaries (i.e., disclose more information) compliance could be gained. Immediate behavior could also get a patient to open up boundaries which could lead to greater patient compliance.

### *Immediacy*

Immediacy could be seen as responsive communication. Responsiveness on the part of another, then, makes us feel that they like us, evaluate us highly, and prefer to interact with us (Richmond & McCroskey, 1998, p. 89). Mehrabian (1971) suggested that immediacy behaviors are those that communicate availability or attentiveness. These are usually sets of behaviors that communicate social accessibility (Goffman, 1964).

Anderson et al. (1979) suggested that the increase in the number and/or intensity of immediacy behaviors produces interpersonal closeness and reduces psychological distance between communicators in positively combined relationships. Because immediacy behaviors are approach behaviors, which increase sensory stimulation and produce interpersonal closeness, they should be seen as a crucial variable for understanding the interaction between a patient and a provider (Anderson et al., 1979).

Mehrabian (1967) suggested that immediacy appears to be related to relational closeness and positive perception of the other interactant. Mehrabian also reported that greater directness of head and body orientation was associated with more positive attitudes of communicators toward one another (Mehrabian A. , 1967). Also, McDowell (1973) found that increased eye contact was positively associated with friendliness, self-confidence, dominance, and affiliativeness (McDowell, 1973). Because immediacy behaviors signal approval, these nonverbal cues may positively reinforce compliant behavior (Burgoon & Burgoon, 1990). Provider immediacy during immediacy events most often focuses on parallels between external relationships and the therapy relationship, promoting expression of immediate feelings, process of termination,

provider expressing disappointment/ sadness/ hurt and inquiring about patient reactions (Kasper, Hill, & Kivlighan JR., 2008). If a patient can re-enact with a provider what has brought on a health problem, a provider could potentially use immediacy with a patient to openly discuss health problems of a patient. A patient might become more aware of the importance of compliance with a regimen through interpersonal patterns with a provider.

A successful patient-provider interaction allows people to exchange crucial information and facilitates greater cooperation from both parties (Kreps, O'Hair, & Hart, 1995). A patient should feel comfortable with a provider when giving information about health needs. For example, a patient should interview a potential provider through an interpersonal lens as well as get to know a provider's main realm of research or practice. This should help a patient feel more comfortable with a provider's sense of immediacy when working with a patient. A patient should be more likely to grant access to his or her thoughts or questions if a provider shows intent to understand thoughts, emotions, and level of privacy of a patient. These are just some suggestions to how a provider could help a patient create a greater sense of immediacy.

Increased immediacy is produced as well by verbal messages indicating openness to the other person, trust for the other, or empathy. Certain words could change the immediacy of how one person reacts to the feelings towards the other person such as "we" instead of "you" (Richmond & McCroskey, 1998). A provider should communicate with their patients by sending positive verbal encouragement by being sensitive to building the interpersonal interaction between each other. By utilizing words like "we", "us" and "our" instead of "I" and "you" could help create less of an interpersonal

interference of communication possibly understanding that “we”, “us” and “our” could be used in a positive manner.

It should be important for both a patient and a provider to be on the same level of understanding and acknowledge nonverbal cues as a way to interpret messages. The twin objectives of any helping relationship are behavioral change and positive affect (Burgoon, Pfau, Parrott, Birk, Coker, & Burgoon, 1987). In a medical context, this translates into a patients’ adherence to a prescribed regimen and satisfaction with the medical care received. A key to the successful achievement of these objectives is the quality of interpersonal communication between health care provider and patient (Smith, Polis, & Hadac, 1981). One example of positive immediacy within a patient-provider interaction was researched by DiMatteo et al. (1982) who found that more sensitive nonverbal cues on the part of the physicians are positively associated with patient’s ratings of satisfaction which is a positive effect. Mehrabian’s (1971) immediacy principle suggests that people approach those they like or evaluate highly and avoid those they dislike or evaluate negatively (Mehrabian, 1971). A physician’s vocal intonation could seem to be an especially strong nonverbal cue. Di Matteo, Prince and Tarantha (1979) found that softer, warmer and non-angry vocal tones produce higher ratings of satisfaction (DiMatteo, Taranta, & Prince, 1979). Health care research indicates that nonverbal immediacy behaviors, such as eye contact and close physical proximity, are important for developing rapport with a patient, conveying intimacy and trust (Burgoon, Buller, Hale, & deTurck, 1984). If a provider uses immediacy with a patient to openly discuss conflicts in the therapeutic relationship, a patient could become aware of and

change these interpersonal patterns, thus, working immediately with the therapeutic relationship can help a patient have a corrective emotional experience and change both internally and interpersonally for a better health care outcome (Kasper, Hill, & Kivlighan, 2008). It should be important for both parties to break down any barriers each person has to communicate effectively and build a strong communication interaction.

*Rationale*

Communication Privacy Management theory helps to explain an interaction of two individuals. The incorporation of immediacy and privacy management can shed light on how compliance is enhanced. There are different boundaries each individual has when interacting with each other. A patient often manages personal boundaries to protect private information. The acceptance of boundaries is always changing and a patient can be motivated to allow certain people access to different pieces of information. This sharing occurs only when a person has weighed the need to share the information against the need to protect them self. When experiencing greater immediacy from a provider and being encouraged to engage in more self-disclosure, a patient can be encouraged to lift privacy filters when interacting with a provider. In turn, a patient may trust enough to comply with what a provider tells them or prescribes.

Immediacy could be an important influence on patient compliance. A patient who hears words such as “we” instead of “you” might communicate more freely on a topic of health (Stevenson, Cox, Britten, & Dundar, 2004). A provider could potentially change the tone of his or her voice to make a patient feel more welcome and inviting to ask more questions or feel more comfortable to disclose more information which shows more of an interpersonal outlook upon the interaction between a patient and a provider. Lastly, a patient focusing on similarities between external relationships and the therapy relationship, promoting expression of immediate feelings, process of termination, and expressing disappointment/ sadness/ hurt could help with bridging the gap of patient

privacy management. Greater compliance could be achieved through more effective immediacy and breaking down barriers.

A key to patient compliance is the quality of interpersonal communication between a provider and a patient (Smith, Polis, & Hadac, 1981). Petronio (2002) argues that CPM theory is dialectical. How a provider communicates with a patient may be more important than the content itself. When a provider is open about a diagnosis and or prognosis and express interests in the well-being of a patient, a patient will be more likely to be immediate within a patient-provider interaction. This in return, could encourage a patient to be more open with a provider and confident with becoming compliant (Petronio & Sweeney Lewis, 2011). If the nature of the relational definition between a provider and a patient is a powerful influence, the perception of a patient towards a provider should influence satisfaction, care received and compliance with the health and medical recommendations made. To test the linkage of immediacy with compliance during a patient-provider interaction, the following hypothesis is provided:

H1: Patient compliance is positively related to the immediacy patients perceive from the physician.

The general idea of privacy management is how people manage their privacy boundaries and the disclosure of private information. Permeability rules refer to the amount, breadth, and depth of disclosure a patient cares to give. For example, CPM argues that a patient will disclose as much information to a co-owner that they feel necessary to make sure they have the definite answers they need to be compliant. Linkage

rules identify who else should be privileged to private information, such as a specialist or a technician (Child, Pearson, & Petronio, 2009).

Patient disclosure (i.e., the loosening of privacy boundaries) should have an impact on patient compliance (Keijsers, Schaap, & Hoogduin, 2000). Especially relevant to this study, research has shown that patterns of disclosure are related to patient compliance (Saypol & Farber, 2010). Disclosure is manifested in how people manage their privacy boundaries, particularly through the manipulation of permeability, ownership, and linkages. The Three dimensions define boundary Structures. Creating an environment for a patient to confidently and shamelessly express thoughts and feelings as well as the ability to believe that private information will be accepted by a trusted provider could lead to successful compliance. Dr. Petronio's theory helps to explain that if a provider understands the true need of a patient, then a patient will be more likely to become immediate with an understanding of a diagnosis of a provider which can lead to compliance (Petronio & Sweeney Lewis, 2011). If a patient notices a provider asking interpersonal questions, this could increase patient compliance. According to the literature review, disclosing boundaries expand and contract depending on each relationship (Allman, 1998). Petronio (1996) explains that a patient will be more likely to comply based on how much information a patient is willing to disclose. While a patient desires to exercise the right to control choices, naturally, a patient also wants the information to be co-owned with a provider (Back, et al., 2008). A patient does not want complete control over information; a patient wants to share it (Petronio & Sweeney

Lewis, 2011). Compliance could be gained by incorporating interpersonal talk when appropriate. Therefore, the second hypothesis is:

H2: Patient privacy management strategies of boundary permeability, boundary ownership, and boundary linkage will be significantly correlated with self-reports of compliance.

By researching the levels of perceived provider immediacy and reported patient disclosure (in the form of privacy management), this can broaden the perspective of how the communication between a patient and a provider can be beneficial. “The trust between doctors and patients works on two main levels, they are between individual patients and doctors and between society and doctors' organizations” (Smith R. , 1998, p. 1917). A patient might perceive the immediacy of a provider in a positive or negative way depending on the interpersonal relationship created or by the type of organization a provider works for. As active participants of healthcare services, a patient increasingly wants active involvement with decisions regarding their health and well-being (Larrabee, 1996). By a patient feeling enough immediacy from a provider, a patient might feel more comfortable to disclose more information.

H3: There is a significant correlation between immediacy patients perceive from their physician and patient privacy management strategies of boundary permeability, boundary ownership and boundary linkage.

Communication Privacy Management theory should play a large role when understanding the influence of perceived immediacy and patient privacy management on patient compliance. By evaluating the levels of immediacy and privacy management,

CPM helps to understand what information a patient is comfortable with when giving personal information and being compliant with a provider. Coming from the standpoint of a patient advocate, this theory could be applied to a medical interaction, which could potentially change the face of health communication. By combining immediacy and privacy management into a study on patient compliance with the backing of CPM, the researcher could potentially determine the relationship of the two variables with patient compliance. There is no set structure of how compliance works because it is created within an individual interaction. Privacy can be looked at by how much an individual is willing to disclose to the other. While measuring immediacy and privacy management for this study, the researcher does not know which variable will predict stronger compliance. This leads to the research question:

RQ1: Which of the following—perceived immediacy, boundary permeability management, boundary ownership management, or boundary linkage management—is the strongest predictor of patient compliance?

### **Chapter III**

#### **Method**

##### *Participants*

The demographics of both areas are in percentage format for age distribution, ethnic breakdown, and sex. According to the official website of Lubbock, Texas (City of Lubbock, 2010), the ethnic breakdown is as follows: Anglo 55.6%, Black 8.7%, American Indian, .3%, Non-Hispanic Two or more races 1.2%, and Hispanic 32.3%. According to the official website of Limestone County (U.S. Census Bureau, 2010) the ethnic breakdown is as follows: White persons 79.4%, Black persons 18.4%, American Indian and Alaska Native persons .9%, Asian persons .4%, Persons reporting two or more races 1.3%, and Persons of Hispanic or Latino origin 18.6%. Based off the demographics reported in the survey it would appear that although all groups are adequately represented, the study reflected that there were a higher proportion of whites than reflected in the population.

The sample included 269 respondents. Surveys of nineteen respondents were thrown out because they were incomplete. The amount of completed surveys received was 250. The demographic make-up of this study consisted of 129 (41.6%) females and 121 (48.4%) males. The respondents ranged in ages from 18 to 85 years of age with a mean age of 30.7. There were five identification codes for the ethnicity of respondents. Those five identifications consisted of 194 (77.6%) White, 27 (10.8%) Hispanic, 13 (5.2%) African American, 12 (4.8%) who identified themselves as Other, and 4 (1.6%) who did not identify themselves. A total of 239 respondents indicated their annual

income, which ranged from \$0.00 to \$240,000.00. The mean income was \$23,630.69, the median was \$5,040.00 and the mode was \$00.00. Eleven respondents (4.4%) did not indicate annual income. Respondents were asked to describe their profession. Out of 243 responses 152 (60.8%) respondents identified their profession as Student, 60 (24%) Healthcare, 10 (4%) General Business 12(4.8%) Other, 7(2.8%) did not identify their profession, 5(2%) Educator and 4 (1.6%) Government. All 249 respondents identified themselves in one of seven levels of education achieved. Out of 249 responses 151 (60.4) reported a highest level of education achieved was High School, 44 (17.6%) Associates, 30 (12%) Bachelors, 12 (4.8%) Masters, 9 (3.6%) GED, two (.8%) Ph.D., M.D. J.D. or equivalent level of education, one (.4%) Middle School and one (.4%) did not identify their highest level of education achieved. Respondents were asked to identify how many times they have a scheduled provider's visit within a year. There were 241 respondents identified how many times they have scheduled provider's visits with a range of .5 to 32 with the mean of 3.74 visits a year. Nine respondents did not indicate how many scheduled provider's visits they have during a year. Respondents were asked to identify the type of religion they practice out of seven choices. 2(.8%) of respondents identified themselves as having Other, 31(12.4%) None, 4(1.6%) Spiritual, 1(.4%) Buddhist, 2(.8%) Atheist, 2(.8%) Muslim and 200(80%) Christian. Eight (3.2%) respondents did not identify their practicing religion. Respondents were asked to identify which county he/she lives in currently and were given three choices to answer from. The three choices were Other, Limestone County and Lubbock County. Out of 248 responses 140(56%) respondents reported currently living in Lubbock County and 40(16%) reported

Limestone County. The 68(27.2%) respondents identified as Other reported living outside of the Lubbock and Limestone County communities (e.g., Houston, Austin and counties adjacent to Limestone County). There were two (.8%) respondents did not identify the county they currently live in. Respondents were asked to identify the sex of their provider as Male or Female. Out of 247 respondents 166(66.4) reported their provider as being a Male and 72(28.8%) identified their provider being a Female. There were thirteen (4.8%) respondents did not identify the sex of their provider. Lastly, respondents were asked to identify the length of time they have had been seeing the same provider. The range reported was 17 to 32 years. Out of 241 responses, respondents identified the amount of time they have been seeing the same provider with the mean of 7.2 years.

### *Procedures*

Institutional Review Board was approved for use of human subjects. Permission was requested from course instructors from the Department of Communication Studies within Texas Tech University to give out the surveys to students taking a Communication Studies course and lastly, permission of community members of Limestone and Lubbock counties. The following describe procedures for collecting data from students at Texas Tech University and from individuals living in the Groesbeck and Mexia communities of central Texas:

Texas Tech University: A formal letter from the researcher was sent to instructors teaching COMS 2300 Public Speaking and COMS 3358 Business & Professional Communication during the 2012 spring semester. With the approval of the course instructor the researcher arranged a day and time to visit the class. An oral script

was used to provide survey directions. An information sheet explaining this study was distributed along with the survey. The course instructor was not present in the classroom. The time to complete the surveys ranged between 5-10 minutes. Students placed their completed surveys in a box, with their names not appearing on the actual surveys. The researchers collected the surveys and kept them stored in a locked filing cabinet in Dr. Scholl's office.

Communities in central Texas and Lubbock area: Community members of Limestone County, Lubbock County or other counties within Texas were recruited through snowball sampling by word of mouth from the researchers. An oral script was used to explain the nature and requirements of the study. An information sheet was distributed for participants to take home with them. The survey took five to ten minutes to complete. No names were collected on the surveys so the data collector remained anonymous.

#### Instruments

##### *Demographic Questionnaire*

Not all of the demographic information from the questionnaire pertained to this study, but will be good to have for future research. The researcher solicited information on the following information: Sex, Age, Ethnicity, Estimated Annual Income, Profession or Occupation, Religious or Spiritual Identification, and County of residence and so on (See Appendix A).

##### *Disclosure Scale*

The researcher created a disclosure instrument that was measured by a Likert scale that focuses on Boundary Permeability, Boundary Ownership and Boundary Linkage (See Appendix B) (Petronio & Kovach, 1997). This scale is helping to operationalize Privacy Boundary Management. Predominately, the researcher focused on how patients feel comfortable or not when disclosing information to a provider, if a patient will disclose or not disclose information to a provider and how comfortable a patient is about a provider being a secondary owner of the information. An initial reliability test was run on this scale using Cronbach's alpha (Frey, Botan, & Kreps, 2000), and the initial alpha coefficient was .65. Because of the marginal acceptance of the coefficient, a principal components factor analysis with Varimax rotation was run to determine whether certain items could be dropped (See Table 1). The eigenvalue was set at 1.0, the purity criterion was set roughly at 70/30, and a scree plot and a loading plot were used to aid in interpretation. Based on a reading of the component matrix and a reexamination of the items, it was decided that dropping items did not make a difference in reliability. Because of the exploratory nature of this scale, this reliability was deemed acceptable for further analysis. In addition to testing the reliability of the overall scale, a Cronbach's alpha was run for each of the subscales (Frey, Botan, & Kreps, 2000). The Cronbach's alpha for the Boundary Permeability, Boundary Ownership and Boundary Linkage subscales were .76, .51 and .41 respectively. Because of the low reliability of two of the three subscales, it was decided to stay with using the reliability of the overall scale. From here on out the tests of the hypotheses and research question only involve the overall scale.

### *Self-reports of Compliance*

Few studies have contributed data to help in the understanding of patient compliance in the health care setting (Hajek, Villagran, & Wittenberg-Lyles, 2007). The researcher utilized several items from the Patient Self-Advocacy Scale (PSAS) which was scored using a 7 point Likert scale for measurable outcomes along; other items came from a study that was looking at patient inclinations of compliance (Hajek, Villagran, & Wittenberg-Lyles, 2007). The scale of patient inclinations of compliance that was drawn from was beneficial in the study when understanding how a patient reports reacting to different scenario questions from their provider on a scale of 1 (*Completely Disagree*) to 7 (*Completely Agree*)(See Appendix C). The PSAS scale was looking primarily at patients who are dealing with minor, not serious or life-threatening issues. To maintain consistency with the phrasing of the hypotheses testing compliance, all but scale items two and eleven were reverse coded. An initial reliability test was run on this scale using Cronbach's alpha, and the initial alpha coefficient was -.302. A principal components factors analysis with Varimax rotation was run to help determine which items could be dropped. The eigenvalue was set at 1.0, and a scree plot and a loading plot were used to aid in interpretation. Based on a reading of the component matrix and a re-examination of the items, it was decided that dropping a few of the items did make a significant change in the alpha coefficient (See Table 2). The items discarded were scale items two, four and ten, because the wording could have been confusing to the respondents. The alpha coefficient was raised to .81. Because of the exploratory nature of this scale, this reliability was deemed acceptable for further analysis.

### *Generalized Immediacy Scale*

Immediacy refers to those behaviors that reduce physical or psychological distance between people (Mehrabian, 1969). Andersen et al. (1979) was the first to create a scale of immediacy and mostly focused on immediacy for classroom use. Because the study is focused on immediacy within a patient-provider interaction, the researcher created an instrument that measures the Patient Perceptions of Provider Immediacy. Immediate behaviors may actually decrease the physical distance, or they may decrease the psychological distance (Wheless, 1978). The more immediate a person is, the more likely he/she is to communicate at close distances, smile, engage in eye contact, use direct body orientations, use overall body movement and gestures, touch others, relax, and be vocally expressive. This instrument ranged with answers from 1 (*Completely Disagree*) to 7 (*Completely Agree*) (See Appendix D). An initial reliability test was run on this scale using Cronbach's alpha, and the initial alpha coefficient was .66. Because of the marginal acceptance of the coefficient, a principal components factors analysis with Varimax rotation was run to determine whether certain items could be dropped. The eigenvalue was set at 1.0, and a scree plot and a loading plot were used to aid in interpretation. Based on a reading of the component matrix and a reexamination of the items, it was decided that dropping items did make a significant change in the alpha coefficient (See Table 3). The scale items four and eleven were discarded because the two items did not fit the scale based on reading the initial factor analysis. After dropping items four and eleven, the alpha coefficient was raised to .84. Because of the exploratory nature of this scale, this reliability was deemed acceptable for further analysis

### *Data Analysis*

The researcher conducted a Pearson's  $r$  correlation to test all three hypotheses. For Hypothesis 1, patient compliance is the dependent variable and immediacy patients perceive from the physician is the independent variable. Hypothesis 2 tested patient privacy management strategies as an independent variable and self-reports of compliance which was the dependent variable. For the third hypothesis, perceived immediacy was the independent variable and privacy management strategies was the dependent variable. For RQ1, a stepwise regression was done to determine if both immediacy and privacy management strategies were both correlated with patient compliance. For all statistical tests, the  $p$  value was set at .05. (Frey, Botan, & Kreps, 2000).

## **Chapter IV**

### **Results**

The survey data were entered into the Statistical Package for the Social Sciences (version 20). What follows are the results of the data analysis organized according to hypotheses and research question.

The first hypothesis predicted that patient compliance would be positively correlated with the immediacy patients perceived from their provider. Provider immediacy was treated as the independent variable while patient compliance was treated as the outcome variable. This hypothesis received support,  $r = .166, p < .01$  (See Table 4) but the statistics explained only about three percent of the variance.

The second hypothesis was originally broken down into three sub-categories which were boundary permeability, boundary ownership, and boundary linkage and that each of these would be correlated with patient compliance. We were going to test this hypothesis by using a stepwise-regression treating patient compliance as the outcome variable and the three privacy strategies being treated as the predictor variables. The analysis was adapted because two out of the three subscales had low reliabilities. The overall scale had a higher reliability than breaking down the scale into sub-categories. Therefore the researcher ran a Pearson's  $r$  test to show a correlation between privacy management strategies and compliance. There was no significant correlation,  $r = -.018, p = .392$  (See Table 5).

The third hypothesis predicted a correlation between perceived provider immediacy and the three privacy strategies, using stepwise regression. Again, instead of

separating out the three sub-categories, the researcher ran a Pearson's  $r$  test to show a correlation between immediacy patients perceive from their physician and patient privacy management. There was a significant inverse correlation,  $r = -.360$ ,  $p < .001$  (See Table 6), suggesting that the higher the immediacy perceived the decreased use of privacy management. The test explained about 13 percent of the variance.

Research question one asked which of the following—perceived immediacy, boundary permeability management, boundary ownership management, or boundary linkage management—was the strongest predictor of patient compliance. Instead of having four predictor variables, the researcher ended up with two—privacy management and immediacy—because of the decision to collapse privacy management into one overall scale. The resulting analysis yielded a test of a model that suggests a combined effect of the predictor variables on compliance. A regression analysis was performed to ascertain which variable will strongly predict compliance (See Table 7 for correlation matrix).. This model only predicted 3% of the total variance ( $R^2 = .030$ ;  $F_{1,236} = 8.261$ ,  $p < 0.005$ ) according to which immediacy ( $\beta = .16$ ;  $p < .005$ ) and privacy management ( $\beta = .07$ ;  $p < .005$ ) predict compliance. Immediacy is the stronger predictor of patient compliance (See Table 8).

## **Chapter V**

### **Discussion**

The purpose of this study was to examine the influence of provider immediacy and patient disclosure (i.e., privacy management strategies) on reports of patient compliance. Petronio's Communication Privacy Management theory served as the theoretical foundation because the theory helps to explain that if a provider understands the true needs of a patient, then a patient will likely become compliant after understanding a diagnosis (Petronio & Sweeney Lewis, 2011). What follows is a thorough discussion of each of the findings as well as an explication of the limitations and implications for future research.

The first hypothesis predicted patient compliance would be positively correlated with the immediacy a patient perceived from a provider. The significant findings should be read with caution because of the sizeable standard deviations of scores and the relatively low correlation coefficient. Nonetheless, based on the preliminary finding, a patient can feel comfortable disclosing information when he or she perceives more immediacy from a provider. For example, when a provider uses phrase such as "we" or "us", can make a patient feel more inclusive within the interaction (Stevenson, Cox, Britten, & Dundar, 2004). The reporting also supports that when there is an increase in the amount of perceived immediacy; it helps to reduce the psychological distance which can lead to more compliance (Anderson, Anderson, & Jensen, 1979).

Communication Privacy Management theory helps support the results of attitudes perceived by a provider which can lead to more effective communication with a provider

and lead to compliant behavior (Cameron C. , 1996). This study tentatively supports the assumption that a patient can be compliant if a provider engages a patient as an active participant in their own care (Groopman, 2007b). Immediacy from a provider can help support responsive communication. If a patient is comfortable with the level of immediacy from a provider a patient is more likely to become compliant. The study supports this in a sense that higher immediacy on the part of a provider, then, makes a patient comfortable towards a provider, highly value a provider which in return, makes a patient interact more with a provider (Richmond & McCroskey, 1998).

The second hypothesis predicted the privacy management strategies would be correlated with patient compliance. This hypothesis did not receive support. This hypothesis might not have been supported in the study due to a diverse group of respondents. The majority of the respondents were students who did not have many doctor's visits within a year, which could signify that going to a provider doesn't mean they need to disclose information to get what they need out of a healthcare outcome. It should be important for a patient to disclose information to a provider. Co-ownership can create a compliant behavior by linking the information disclosed by a patient to another provider who might need to be involved in the health interaction, which in return can create a compliant behavior of a patient (Weiner et al., 2005). Future studies of the privacy management strategies can be improved to clarify the correlation of boundary permeability, boundary ownership and boundary linkage on patient compliance specifically with regard to the scale used in the study. We can learn that it is important to

understand what types of respondent groups are chosen for this type of study and make sure that the surveys can be changed to fit certain demographical information.

The third hypothesis showed a significant inverse correlation between perceived provider immediacy and the privacy management strategies. This finding suggests that a patient who perceives positive immediacy from a provider can have a better interpersonal relationship with a provider. This can help a patient become more active with health care decisions and well-being (Larrabee, 1996). We can learn that based off of this study, it can be altered to become a qualitative study focused on verbal cues a provider might give to help with privacy management strategies of a patient. Different environments where the communication interaction occurs could be a factor on how both a patient and a provider feel comfortable with becoming more immediate towards a patient disclosing information. For instance, if a patient is in a busy doctor's office where the walls are so thin that you can hear a patient speaking in the room next to you, might cause a patient to re-strategize privacy management to not disclose enough information to a provider because of security of information being given.

Research question one asked which of the following—perceived immediacy, boundary permeability management, boundary ownership management, or boundary linkage management—was the strongest predictor of patient compliance. The model grouped all three management strategies as “privacy”. Therefore the model only included immediacy, privacy and compliance. In spite of the *p* value, the adjusted R square was low. The combined model of immediacy and privacy management strategies needs to be interpreted with caution. Because there is little information within the literature on how

immediacy could potentially be a stronger predictor of patient compliance than privacy management strategies, it was difficult to predict if either immediacy or privacy management strategies would be a stronger predictor of patient compliance. Immediacy was the stronger predictor of patient compliance. However, it might be argued that Communication Privacy Management theory plays a role in determining predictors, though research needs to be conducted further in depth to find out whether the combination of immediacy and privacy management strategies have an impact on compliance. We can learn that if a provider can become immediate with a patient, then in return, discussing the health benefits of taking a prescribed regimen not from an individual standpoint, but as a team effort, a patient could become more compliant to a regimen.

#### *Limitations*

As for limitations, the sample was quite diverse (e.g., wide age range), which might have contributed to some of the large standard deviations in scores. This could also have resulted from the sample size; a larger sample might bring the variance in scores to a more normal range. Adding more scale items to the privacy management strategies could elaborate more on how a patient decides on what information will be shared with a co-owner. Adding more statements on how a patient allows co-ownership of information could also identify more on how privacy management works. This would solve the limitation to expand on how a patient creates rule-based privacy management strategies with a less diverse group of respondents.

Having a diverse group of participants in the study could have contributed to a higher standard deviation when it comes to certain demographic information. When there is less of a range of diverse participants, responses might lean more towards one side of the research or another. Putting a focus on certain participant groups such as grouping people into age groups, number of provider visits and length of relationship with a provider could bring the variance closer to normal.

Another limitation of this study only focuses on a general level of immediacy a patient perceives by a provider. Focusing more on a specific reason for immediacy can help to examine patient compliance such as patient and provider age gap differences. Age differences between a patient and a provider could limit the level of immediacy a patient perceives by a provider. Focusing on scale items related more towards age difference and perceived immediacy could explore further detail of patient compliance.

A constraint to size of participant population also contributed to skewed numbers. The research was conducted only on a small size of population who had seen a provider in the past six months. Therefore, to gain more results for a larger population of participants, the study should have involved more participants that have seen a provider in the past twelve months. To some extent, this could affect the result of the correlations between privacy management and immediacy with patient compliance.

If the study had to be done over again, the researcher would modify scales. When modifying the scales, the researcher will make sure that the statements are easy enough to understand to guide a participant. Correct wording within a scale should be seen important to the study. If the compliance scale could be changed to be geared towards

positive statements, the compliance outcomes for the survey might be different. Another problematic are with the scales were they were too short. The scales should be lengthened to help a researcher gather more information of a respondent on the three variables looked at.

There are a couple of theoretical implications about Communication Privacy Management that have evolved out of this study. In a perfect patient-provider interaction, communication can be a smooth process of information exchange. Unfortunately, it is difficult to tell whether a patient is disclosing or not disclosing information to a provider. An example of this could be further researched during a patient-provider interaction at an Emergency Room visit after a serious car accident and a patient is hemorrhaging. Having a close family member or friend engaged in the health interaction as co-owners of information could help remove privacy management boundaries of a patient if a patient is incoherent or refuses to disclose necessary information. This could be important for a provider to know if a co-owner reveals a patient is HIV positive. In a circumstance, the information given by a co-owner could save the life of a patient and help a provider follow correct procedures based off of disclosed medical history of a patient.

Another implication is related to how a patient perceives immediacy from a provider.

Wright et al. (2008) states:

Although the different backgrounds, perceptions, needs, and expectations of provider and patients make it challenging for successful and satisfying communication to take place in medical encounters, understanding issues

and how they impact health outcomes is a first step towards improving patient-provider communication. (p. 35)

Providers should be coached on ways to get a patient to open up to. A provider could ask questions to clarify the expectations of a patient visit, clarify what is needed from a patient, express the difference of understanding between a patient and a provider, be verbal about any misunderstandings there are within the communication to a patient, encourage a patient to be involved in decision-making, make sure interpersonal non-verbal or verbal messages are given and a provider should also have a patient be involved in the development of a treatment regimen. Such immediacy behaviors from a provider could potentially help a patient truly understand the importance of compliance.

#### *Future Research*

Future research can stem from the initial findings. One study could focus on specific cultural communities and how they create privacy management strategies based on their cultural beliefs. Understanding cultural competencies is important within a patient-provider interaction (Brach & Fraserirector, 2001). “Culture permeates all aspects of life and it influences our perceptions and experiences of life events, including health-related situations” (Wright, Sparks, & Dan O'Hair, 2008, p. 101). Focusing research on immediacy, privacy management strategies, and patient compliance within a targeted culture could help extend the importance of knocking down cultural barriers.

Even though disclosure should be seen as the driving force of Communication Privacy Management theory, the feeling of immediate behaviors does have an added impact on a patient disclosing or not disclosing information. Future research will help to

explain the phenomenon of immediacy and disclosure with a focus on compliance within a patient-provider interaction. Survey scales could be lengthened and subscales could be tied together better with a closer meaning to help with the outcome of immediacy, privacy management strategies and compliance.

Another future research direction could focus on groups of patients who visit a provider within a certain amount of time. Categorizing a patient by age group and amount of provider encounters throughout a year could be an example. Patient age is important when understanding the amount of provider encounters a patient incurs in a year (Peck, 2011). In other words, the older a patient gets, the more a patient might visit a provider. This concept could tie in with the current rise in healthcare costs. Baby boomers are entering the golden years of life and are now starting to receive Medicare and Medicaid healthcare plans. With this, government grants are being offered to healthcare institutions to help increase higher quality health outcomes of a provider visit to lower the cost associated with prescribed regimens. In return, if a patient has a positive health outcome from being compliant with a provider, it should lower the rising costs associated with healthcare such as potentially-preventable hospitalizations (CMS Office of Public Affairs, 2012). Researching age groups with the amount of provider encounters a year could target reasons for rising healthcare costs.

Future research would be valuable to further examine how a patient constructs rule-based privacy management strategies. Knowing what those indicators are can lead to understanding how immediacy along with disclosure could lead to a checklist to examine how compliant a patient is. A provider could create a mental checklist based on how a

patient describes a daily routine. The mental checklist a provider creates could help guide a patient with better direction on how to follow a regimen. An example could be a provider clarifying what he or she said to a patient. Once any misunderstanding is identified on how to follow a regimen, a provider could ask for more clarification from a patient on the misunderstanding. If a provider is perceived as being immediate, the patient might be more encouraged to open up.

### *Conclusion*

Immediacy and disclosure can be important predictors of patient compliance. There are many different ways to define compliance. This study focused on how a patient adheres to a provider's medical recommendations and directives. Based on the outcomes of the research, it is crucial to further the understanding of how immediacy and privacy management strategies affect patient compliance within a patient-provider interaction. Communication Privacy Management theory also plays a role in how a patient and a provider could set boundaries and privacy management strategies to break down or keep personal information private. CPM should continue to be the foundation on how immediacy and disclosure play a role in patient compliance.

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**Appendix A**  
**Respondent Demographics**

Demographic Information: Please answer any or all of the questions below by filling in the blank or circling the best-matched choice.

Sex (circle one):      Male              Female

Age: \_\_\_\_\_

Ethnicity: White (Anglo)    Hispanic      African American    Other

Estimated annual income: \_\_\_\_\_

Profession or occupation (if student, list academic year and major):

\_\_\_\_\_

Highest level of education:

- None
- Elementary
- Middle School
- High School
- GED
- Associates Degree
- Bachelors degree
- Masters
- Ph.D., M.D. J.D., or equivalent

Estimated number of doctor visits a year: \_\_\_\_\_

Religious or spiritual identification (if any):

\_\_\_\_\_

County or city in which you currently live (circle one):

\_\_\_\_\_

Is your primary doctor:      Male    or    Female

How long have you been seeing your physician? \_\_\_\_\_

## Appendix B Disclosure Survey

**Instructions:** please mark the following statements to reflect how *you* communicate *with* your physician. Indicate the degrees to which the following statements reflect how you communicate with this person by marking whether you (1) *completely disagree* to (7) *completely agree*. Record the number of your response in the space provided. Work quickly and just record your first impressions.

Completely Disagree	1	2	3	4	5	6	7	Completely Agree
------------------------	---	---	---	---	---	---	---	---------------------

### Boundary permeability items

\*When I face problems in my life, I feel comfortable talking about them with my doctor. \_\_\_\_\_

I find that I talk too much with my doctor about myself. \_\_\_\_\_

\*I like to keep personal concerns from my doctor. \_\_\_\_\_

I often tell personal things to my doctor without hesitation. \_\_\_\_\_

\*I keep information from my doctor about my day-to-day life. \_\_\_\_\_

I think my doctor knows a lot about me. \_\_\_\_\_

### Boundary ownership items

I do not limit the personal information I share with my doctor. \_\_\_\_\_

\*I usually am slow to talk about personal events because my doctor might talk about them to others. \_\_\_\_\_

\*I don't talk about certain things because I worry about who might have access to that information. \_\_\_\_\_

\*Knowing personal details about my doctor makes me feel I should keep their information private. \_\_\_\_\_

\*I am certain that personal things I tell my doctors remains under my control. \_\_\_\_\_

\*When I reveal private information I expect it won't be repeated anywhere. \_\_\_\_\_

### Boundary linkage items

I tell my doctor certain things so he or she might link me with others who are going through the same thing. \_\_\_\_\_

I try to let my doctor know my interests so that I can be directed to the right specialist doctor if I need to see one. \_\_\_\_\_

I'm okay with the fact that other people might have access to my private information. \_\_\_\_\_

I tell my doctor things about myself in a variety of ways—notes, pictures, emails, phone calls, etc. so he/ she knows me better \_\_\_\_\_

†I comment on things my doctor tells me so I understand what he / she said. \_\_\_\_\_

I don't talk about certain things because I worry about who might have access to that information. \_\_\_\_\_

### Appendix C Compliance Survey

**Instructions:** please mark the following statements to reflect how *you* communicate with your physician. Indicate the degree to which the following statements reflect how you communicate with this person by marking whether you (1) *Completely Disagree* to (7) *Completely Agree*. Record the number of your response in the space provided. Work quickly and just record your first impressions.

1	2	3	4	5	6	7
Completely					Completely	
Disagree					Agree	

- \*I don't take my prescription medication in the doses I was prescribed. \_\_\_\_\_
- †I always fill the prescription my doctor gives me. \_\_\_\_\_
- \*I don't always follow the advice my doctor gives me. \_\_\_\_\_
- †For my medicine to work, I do my best to take it exactly according to the instructions given. \_\_\_\_\_
- \*Side effects to medication would prevent me from taking it as often as I am instructed to. \_\_\_\_\_
- \*I sometimes forget to take my prescription drugs. \_\_\_\_\_
- \*I'm sometimes careless when it comes to taking my prescription drugs. \_\_\_\_\_
- \*I'll stop taking my drugs if I'm feeling better, even if the instructions tell me to keep taking them. \_\_\_\_\_
- \*I can be careless when it comes to taking my prescription medication. \_\_\_\_\_
- †I engage in the positive health behaviors that my doctors suggests for me. \_\_\_\_\_
- \*I start to follow my doctor's advice, but I just can't stick with it. \_\_\_\_\_
- \*I forget to take my medicine. \_\_\_\_\_
- \*I can be careless about taking my medicine. \_\_\_\_\_
- \*If my doctor were to tell me to schedule a follow-up appointment, I normally don't if I feel better. \_\_\_\_\_
- \*I would not change the prescribed dosage of my medications even if I thought I would benefit from it. \_\_\_\_\_
- \*I don't take the medicine that is prescribed by my doctor because it is too expensive. \_\_\_\_\_

## Appendix D Patient Perceptions of Provider Immediacy

**Instructions:** please mark the following statements to reflect how *you* communicate with your physician. Indicate the degree to which the following statements reflect how you communicate with this person by marking whether you (1) *Completely Disagree* to (7) *Completely Agree*. Record the number of your response in the space provided. Work quickly and just record your first impressions.

1	2	3	4	5	6	7
Completely					Completely	
Disagree					Agree	

- My provider recognizes when I do something good. \_\_\_\_\_
- My provider seems to want to collaborate with me on my issue or problem. \_\_\_\_\_
- \*My provider never asks me about my condition and how it's affecting me. \_\_\_\_\_
- †My provider never acts like he or she is glad to see me. \_\_\_\_\_
- My provider often says things that make me feel close to him or her. \_\_\_\_\_
- \*My provider's body language makes me feel distant from him or her. \_\_\_\_\_
- My provider usually acknowledges or affirms any feelings any pain, discomfort, or anxiety I'm going through. \_\_\_\_\_
- \*My provider never has thanked me for seeing her or him. \_\_\_\_\_
- My provider has said that she or he was okay with something I did or didn't do. \_\_\_\_\_
- \*My provider does not give me reassurance. \_\_\_\_\_
- †My provider sometimes feels distant. \_\_\_\_\_
- \*My doctor hardly ever notices when I do something good. \_\_\_\_\_

**Appendix E**  
**Tables**

**Table 1: Disclosure Component Matrix**

	Component				
	1	2	3	4	5
DBP1	.730	-.208	-.168	-.110	-.083
DBP3	.658	-.299	.236	.060	.082
DBP4	.645	-.262	-.159	.208	.127
DBP5	.463	-.335	.337	.245	-.061
DBP6	.692	-.109	-.186	-.016	.055
DBO2	.024	-.613	.307	-.206	.292
DBO3	.086	.111	.599	.172	.391
DBO4	-.073	.334	.107	.593	.422
DBO5	.377	.555	.100	-.342	.084
DBO6	.094	.665	-.096	-.299	.348
DBL2	.325	-.211	-.308	-.496	.267
DBP2	.488	.118	-.268	.248	-.402
DBO1	.154	.443	.509	.065	-.330

DBL1	.331	.146	-.326	.342	.406
DBL3	.475	.523	.256	-.358	-.003
DBL4	.513	.401	.019	.223	-.229
DBL6	.170	-.316	.541	-.191	-.085

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

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Table 2: Self-Report of Compliance Component Matrix

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	Component			
	1	2	3	4
C1	.541	.250	-.366	.037
C3	.502	.215	-.460	.376
C5	.313	.351	.114	.602
C6	.723	-.252	.295	.138
C7	.766	-.045	-.143	-.244
C8	.599	-.006	-.125	-.007
C9	.791	-.085	.061	-.227
C11	.572	-.100	.035	.396
C12	.751	-.300	.332	.124
C13	.808	-.224	.126	-.253
C14	.350	.612	.291	-.326
C15	-.113	.383	.684	.123
C16	.457	.498	-.173	-.250

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

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Table 3: Generalized Immediacy Component Matrix

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	Component			
	1	2	3	4
IMM1	.697	-.248	.227	-.049
IMM2	.771	-.227	.106	-.115

IMM3	.559	.159	-.216	-.092
IMM5	.601	-.295	.126	.065
IMM6	.698	.052	-.317	-.046
IMM7	.677	-.231	.051	.085
IMM8	.569	.157	-.384	-.038
IMM9	.447	-.423	.378	.325
IMM10	.672	.104	-.254	.094

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Table 4: Hypothesis-1 Positive Correlation Between Perceived Immediacy and Compliance

	Mean	Std. Deviation	N
CTotal	30.4268	8.64402	246
IMMTotal	49.6789	10.71936	246

Table 5: Hypothesis-2 Correlation Between Disclosure and Compliance

	Mean	Std. Deviation	N
CTotal	30.5602	8.46153	241
DTotal	73.7469	12.21944	241

Table 6: Hypothesis-3 Correlation Between Immediacy Patients Perceive from their Physician and Patient Privacy Management

	Mean	Std. Deviation	N
DTotal	73.7059	12.19556	238
IMMTotal	49.7899	10.70027	238

Table 7: Research Question 1. Influence of Immediacy and Privacy Management on Compliance

		<u>CTotal</u>	<u>IMMTo</u>	<u>DTotal</u>
Pearson Correlation	CTotal	1.000	.184	-.020
	IMMTotal	.184	1.000	-.360
	DTotal	-.020	-.360	1.000
Sig. (1-tailed)	CTotal	.	.002	.379
	IMMTotal	.002	.	.000
	DTotal	.379	.000	.
N	CTotal	238	238	238
	IMMTotal	238	238	238
	DTotal	238	238	238

Table 8: Research Question 1. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	22.554	3.331		6.771	.000
1 IMMTotal	.114	.046	.158	2.494	.013
DTotal	.032	.030	.067	1.060	.290