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Adrienne L. Russell  
aruse36@vols.utk.edu

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# The Role of Effective Communication in Medicine

Adrienne Russell

Chancellor's Honors Program

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Dr. Suzy Prentiss

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**Abstract:**

The purpose of this thesis is to review literature pertaining to communication in the field of healthcare, specifically the communication between a doctor and his or her patient. Health communication, a relatively new area of study, is defined and generally described in order to provide background information on how the field is increasing in relevance and importance. Analyzing the different components of the doctor-patient relationship with the ultimate goal of improving this relationship has been the focus of a great deal of research in the past couple of decades, and the results of some of these studies are evaluated. The curriculum of various medical schools across the country is also analyzed in order to determine if communication strategies are being improved upon early in medical education, and what effect, if any, is seen. The hope of many researchers is that if these strategies and the doctor-patient relationship are improved upon, less communication errors will take place, patients will leave the doctor feeling less anxiety or confusion about what took place, and subsequent health benefits will be seen.

## What is health communication?

According to the National Communication Association in their general article entitled “What is Communication”, health communication is defined as “the study of communication as it relates to health professionals and health education, including the study of provider-client interaction, as well as the diffusion of health information through public health campaigns.” For a more succinct definition, the CDC and the National Cancer Institute have defined health communication as “the study and use of communication strategies to inform and influence individual decisions that enhance health” for over a decade. This specific kind of communication can take forms that are both written and verbal, and strategic planning for effective communication in the healthcare field requires some variation of all or some of these steps: review background information to define the problem, set communication objectives, analyze and segment target audiences, develop and pretest message concepts, select communication channels, create pretest messages and products, develop a promotion plan, implement communication strategies and conduct process evaluation, and conduct outcome and impact evaluation. In layman’s terms, these steps can determine what a healthcare professional wants to accomplish via communication, who they want to reach, how to say what needs to be said, and how well the message was delivered and received. (“What is Health Communications?”)

Despite the fact that communication is at the heart of who human beings are as individuals and the fact that it is common sense that communication is vital in medicine, health communication was not allocated a chapter in the United States of America’s Healthy People

objectives until 2010. This demonstrates just how new this particular field of communication actually is as well as how important is it becoming in healthcare. The Healthy People objectives are determined each year by the United States Department of Health and Human Services, and they now view health communication as relevant in every aspect of an individual's health and well-being. This includes aspects such as disease prevention, health promotion, and quality of life. ("Why Health Communication is Important in Public Health")

For instance, the increase in prominence of this field is seen in concert with developments being made in the study of the environmental, social, and psychological influences on behavior and health. Due to the fact that conversations about and actions promoting prevention are becoming more and more necessary in global healthcare today, health communication scholars and practitioners have recognized the importance of understanding more about human behavior to enact effective preventative measures, utilizing what has been learned in the field of health communication as the medium through which to connect with more people. It is their hope that this will enable preventative measures to be better received and acted upon by individuals in their daily lives ("Why Health Communication is Important in Public Health")

Though many know that communication is the way that individuals exchange information with one another, its symbolic capability that serves to represent humans as part of a larger social community is commonly overlooked. This role is important because it demonstrates how individuals are members of social networks that interact with each other and how meaning stems from this habitual interaction. In healthcare, the dual role of

communication as a means to transmit information and as a ritualistic process must be realized. When healthcare professionals recognize this dual role, they can then recognize that communication interventions cannot be generalized and should instead be tailored to each patient, that discrepancies can arise as messages are sent and received due to the differences in the ways that the two individuals process and decode information, and that communication is dynamic in that the sources and receivers of information interchange roles quite often. This is not to say, however, that the simple realization of the dual role of communication and the use of these communication principles will prevent all future challenges in public health. (“Why Health Communication is Important in Public Health”)

Overall, the health communication field is gaining more recognition and becoming more relevant due to its combined emphasis on both theory and practice with the ultimate goal of better understanding communication processes and changing human behavior. Researchers and practitioners from diverse backgrounds and involved in various aspects of healthcare are being brought together for the first time to make strides in this field and ultimately save and improve patients’ lives. (“Why Health Communication is Important in Public Health”)

### **What role does doctor-patient communication play in the quality of care?**

Though the field of health communication has gained more recognition and made a great deal of progress in the past two decades, the insight that has been obtained is, unfortunately, limited. Extensive experimental research with a focus on the communication process during medical consultations has been conducted; however, the relationship between a

doctor and a patient is one of the most complex interpersonal relationships to understand. This is due to the fact that this particular relationship involves two individuals in positions that are not equal, is usually not voluntary, deals with issues of great importance, is typically emotional, and entails close cooperation in order to be most effective. Despite the fact that a whole host of technology may be utilized in order to diagnose and treat a particular patient, perhaps the most important tool a physician can use is his or her interpersonal relationship with his or her patient. This is the only way by which information can be exchanged and effective communication can take place. (Ong, et al. 1995)

The majority of the information that plays a crucial role in making an adequate diagnosis comes from the initial interview. The physician's interpersonal skills during this interview also serve to shape the patient's impression of his or her competence and knowledge and ultimately lead to patient satisfaction, compliance, and, thus, positive healthcare outcomes. Of the interpersonal skills a physician can possess, the most sought after is active listening to the concerns of each individual patient. (Simpson, et al. 1991) According to John Grohol, a psychologist, active listening can be defined as the type of listening that focuses on building rapport, understanding, and trust with the person with which one is communicating. Effective active listening includes elements such as restating or summarizing something the speaker has said to prove the other is listening, using short positive phrases such as "Oh?" to keep the conversation flowing, giving feedback, and asking pertinent questions when appropriate. As can be expected, when these elements are missing and there are deficiencies in communication in a healthcare setting, public dissatisfaction increases. ("Become a Better Listener: Active Listening")

Numerous studies in countries across the globe have proven that communication deficiencies in medical practice are quite common. One study, performed in 1981, has shown that in 50% of visits, the doctor and the patient do not agree on the nature of the main presenting problem. (Starfield, et al. 1981) Another study, performed in 1984, found that physicians actually interrupt patients an average of eighteen seconds into the patients' description of their presenting problems. This prevented the patients from discussing any other significant concerns that they had planned on discussing with their physician prior to the interruption. (Beckman, et al. 1984) In fact, a subsequent study performed in 1987 showed a significant decrease in patient blood pressure when they were allowed the opportunity to express any and all concerns they had without fear of interruption. (Orth, et al. 1987) It has been shown that the majority of patient complaints stem from lack of communication or from communication problems rather than the competency of the physicians themselves. These errors in communication are also the leading cause of malpractice allegations across the country. Furthermore, a surprisingly low proportion of patient visits contain any kind of patient education, and the majority of patients are unable to remember or understand what their physician told them about their diagnosis or treatment following the visit. This is primarily due to the fact that the physician underestimates the amount of information desired by the patient and because he or she speaks solely in jargon the patient is unable to understand when providing any information at all. This uncertainty and lack of information ultimately leads to increased patient dissatisfaction and anxiety. (Simpson, et al. 1991)

Positive health outcomes result when effective communication takes place, and this type of communication is attainable in clinical practice without causing the visit to be



unnecessarily lengthy in turn. In order to become effective communicators in this clinical setting, physicians must do more than merely practice talking with patients. They must possess an understanding of psychiatry and the way it relates to medicine; for instance, the diagnostic clues indicating depression or anxiety could prove invaluable in certain situations. They must also master the skills needed for effective medical interviewing. These include data gathering, forming and maintaining relationships, dealing with difficult issues, and imparting information. As can be expected, therapeutic skills and strategies are also beneficial, especially coupled with beliefs in the importance of a biopsychosocial perspective, a positive regard for patients, and a physician's growth and self-awareness. (Simpson, et al. 1991)

**What is a specific study that illustrates the importance of doctor-patient communication?**

Unfortunately for this particular field of research, studies such as these are extremely difficult to conduct due to the inevitable breach in doctor-patient confidentiality. According to the American Medical Association's article entitled "Principles of Medical Ethics", "A physician shall respect the rights of patients, colleagues, and other health professionals, and shall safeguard patient confidences and privacy within the constraints of the law." Thus, he or she is unable to divulge patient information without first receiving expressed consent from the patient. Furthermore, when studies that involve the direct use of human subjects are conducted, they must first be reviewed and approved by the Institutional Review Board (IRB). Until this study is completed, the IRB continues to periodically monitor all research that is taking place. This way, human subjects and their rights are protected throughout the research

process; however, obtaining IRB approval can be challenging if the study plans to release a great deal of what would otherwise be confidential patient information. Because patients retain their rights to refuse to allow their information to be shared throughout these studies, adequate research regarding flaws in doctor-patient communication can sometimes be difficult to perform. However, it is by no means impossible, as many studies regarding this topic have been conducted. (“What is the IRB?”)

For instance, Barbara Korsch and Vida Francis Negrete recognized that the problem of dissatisfaction with medical care in the United States lies not only with inadequate financing or insufficient facilities and personnel, but with poor communication between a doctor and his or her patient as well. As technology grew more sophisticated and new medical research was published, they realized that, oftentimes, a doctor is too engrossed with the technology and the problems that seem to go hand in hand with technology as well as with his or her knowledge of an elite jargon to even be concerned about communicating effectively with the patient. Furthermore, the longstanding close relationship between a patient and his or her “family doctor” was beginning to be replaced with shorter visits to an unfamiliar specialist. Thus, at the time of this study, bedside manner and building rapport with a patient were beginning to be seen as mundane tasks that were beneath many physicians. (Korsch, et al. 1972)

In order to demonstrate the critical importance of a more personal interaction that is replete with effective communication, Korsch and Negrete use the example of an anxious mother who visits the doctor in order to help her son recover from a persistent cough. The physician sees the mother, does not greet her by name, asks a few routine questions, examines

the son, diagnoses the problem in a way the mother is unable to understand, and prescribes medication. Because the mother is overwhelmed and left with the feeling that both she and her son's cough are unimportant, she may buy cough syrup from the drugstore instead of filling the prescription to treat the cough. However, if the cough was more than something that could be treated easily with cough syrup, she has unknowingly placed her child in jeopardy. Also, because she is unlikely to return for a follow-up visit, the physician will more than likely attribute her as being an uncooperative parent. Clearly, the significance, misunderstandings, and possibly harmful consequences that stem from simple communication errors are much greater than one might initially expect. (Korsch, et al. 1972)

The research team that Korsch and Negrete formed worked primarily at the Children's Hospital of Los Angeles that is associated with the University of Southern California School of Medicine in order to investigate the problems that stem from lack of doctor-patient communication. They recognized that though the medical schools teach complex classes on medical science, learning the "art" that is real-world medical practice is most often left up to the individual medical student's initiative and intuition. They were among the first to state that no matter how competent and well-trained a physician may be, this competence will be for naught if his or her communication skills are lacking. (Korsch, et al. 1972)

Korsch and Negrete desired to isolate the doctor-patient relationship in order to examine the communication process itself, and they chose a large patient sample from a variety of ethnic, social, economic, and cultural backgrounds. The physician sample was sizeable as well. In each situation, a child and his or her parent would visit a physician in the emergency

clinic of the Children's Hospital, the parent would present an acute illness that was easily treatable, and the physician would treat the child to the best of their ability. This study observed 800 visits by 800 different patients. Each of these encounters was recorded and the research team later met with the patients to appraise how they responded to the medical interview and the instructions given by the physician. This specific setup of the study provided several controls and minimized corruption of data due to potential extraneous factors. For instance, because the patient visited a new physician, the encounter was not tainted with previous meetings or interactions that would serve to affect the doctor-patient communication. Korsch and Negrete's findings were then supplemented with hundreds of different encounters, primarily basic checkups of well children both in the hospital and in private practices. These encounters served to confirm the validity of the data obtained in the study. (Korsch, et al. 1972)

When the mothers were interviewed following the visit and asked about their satisfaction with what the physician said and did, it was found that 40% were highly satisfied, 36% were moderately satisfied, 11% were moderately dissatisfied, and 13% were highly dissatisfied. Though the majority of the mothers claimed to be satisfied, 149 of the 800 felt they did not receive a clear description of what was wrong with their child, and over half left the physician still confused as to what had caused the problems seen in their children. When follow-up interviews were conducted focusing this time on how well the mother had complied with the instructions given by the physician, it was found that 42% complied with all instructions given, 38% had complied in part, and 11% had not complied at all. As can be expected, a correlation was seen between the degree of the mother's satisfaction and the

degree of the mother's compliance. Of all the highly satisfied mothers, 58% complied entirely and of the highly dissatisfied mothers, only 16.7% complied entirely. (Korsch, et al. 1972)

Korsch, Negrete, and the research team then analyzed the content of each encounter in detail using an adaptation of Robert Bales', a psychologist, "interaction process analysis" technique. The purpose of this was to determine the positive or negative effects that content and tone have on verbal interaction in order to shed light on specific problems in doctor-patient communication. It was quickly found that time spent with the patient in the encounter was not correlated with an increase or decrease in patient satisfaction. However, one of the largest, but not the largest, correlations was seen between the jargon used by the physician and the degree of satisfaction. When terms such as nares, peristalsis, and Coombs titer were used, the majority of the mothers were unable to understand their meaning. Also, in one specific encounter, a mother was told that her child needed to be "admitted for a work-up", and she did not realize that this entailed a hospitalization. Many cases similar to this were observed as well. In over half of the encounters, the physicians resorted to medical jargon because they were unable to speak to the mothers in terms that could be more easily understood, and this typically left the mothers feeling confused about their child's illness. Another find was that there was no correlation between mothers who were college-educated and satisfaction with the physician's communication and use of jargon. (Korsch, et al. 1972)

Perhaps the biggest problem in doctor-patient communication was seen in that most of the mothers were expecting the physician to be friendly and sympathetic to their cases, but were instead faced with physicians who seemed uninterested entirely. In fact, less than 5% of

the encounters possessed a friendly conversation, and the physician primarily focused on the technicality behind the child's illness. The fact that this typically results in the mothers blaming themselves for their children's illnesses was confirmed in that 300 of the 800 mothers felt this way. In one case, the physician actually stated, "Stevie, it's your mother's fault that you have this high fever." (Korsch, et al. 1972)

One of the advantages of this particular study, as well as the many others that have been conducted in a similar way but in different disciplines, was that it allowed researchers to pinpoint exact causes for communication breakdowns, patient dissatisfaction, and physician errors. For instance, over half the physicians who took part in this study believed they were being friendly, but less than half of the mothers agreed and 193 mothers went so far as to say the physicians they saw were strictly businesslike. Furthermore, it was seen that when the physicians paid attention to and addressed the mother's specific worries and concerns, the mothers were more satisfied. Thus, physicians can learn that beginning a medical interview with open-ended questions such as "Why did you bring your child to the clinic?" allows the mothers to express any and all concerns they may have. Though these may be irrelevant to the diagnosis, simply listening and addressing them reassures the mother and increases her later degree of compliance. (Korsch, et al. 1972)

The analyses using the adapted version of Bales' technique yielded a few surprising results. For example, contrary to what the physicians may have thought, they were the ones doing the majority of the talking in the interviews. The most successful encounters were the ones where the patient was actively involved in the conversation with the doctor and asked

questions pertaining to what was being discussed. Unfortunately, despite the desire they expressed for more information following the encounter, patients were surprisingly hesitant to ask many questions. One finding goes against the convention that doctors should strengthen their image as a figure of authority by maintaining a certain social distance away from their patients. It was seen that when a great deal of positive effect, such as friendly remarks and support, was exuded by the doctor, both patient satisfaction and compliance increased. (Korsch, et al. 1972) Perhaps this could serve as insight that should be taken into consideration when training the next generation of medical professionals.

### **Has this problem worsened since the 1970's?**

A similar study to the one previously described was conducted in India in 2015 using a community-based cross sectional analysis of 105 patients who had seen a doctor in the past 15 days. They were interviewed about their experience via a questionnaire that focused on their degree of satisfaction, the behavior of the doctors they saw, the information they received during the consultation, and if they desired any additional information from the doctors. At the conclusion of the study, it was found that 39% of patients were not satisfied with any of these aspects of their experience. This is an increase from the 11% of patients who were moderately dissatisfied and the 13% of patients who were highly dissatisfied in the study by Korsch and Negrete in 1972. In the 2015 study, patients expressed similar suggestions for physician improvement such as being friendlier and more sympathetic overall, using clearer language, and relieving their patients' fears and worries more effectively. (Sebastian, et al. 2015) Clearly,

the problem is worsening as time goes on, but what patients desire from their interaction with their physicians is unchanging.

The purpose of this study and others that are similar is to bring to light simple changes that can be made in the demeanor of physicians that science has proven will lead to favorable outcomes, such as increased patient satisfaction. This could serve to enhance the profession as a whole by eliminating some of the most prominent issues with doctor-patient communication. It also further emphasizes the need to better understand and research health communication and problems associated with it.

### **How are medical schools addressing the problems associated with lack of doctor-patient communication?**

As can be inferred, traditional medical education is ineffective in teaching clinical communication skills. In fact, due to the stressful and competitive nature that is commonly associated with medical school, this type of education often leads to cynical and callous attitudes. Unfortunately, despite the fact that a great deal is known about courses that effectively teach good communication skills, medical schools across the country vary in the quality and intensity of communication courses they offer, if they offer communication courses at all. Elements of successful courses include highly structured programs that clearly identify a specific skill necessary for effective communication and go so far as to demonstrate, practice, and evaluate the use of that skill by the medical students. Other elements include a low student



to teacher ratio to allow for more practice and educated feedback and the use of audio and video reviews to allow students to watch and critique themselves. (Simpson, et al. 1991)

Currently, the majority of medical schools employ a technique referred to as “standardized patients” in order to better teach and practice communication skills. This technique involves using individuals from the community who are trained to act as patients and to present a set of symptoms to the medical students in a clinical setting. This allows medical students to practice performing physical examinations, taking the patient’s history and physical, and, of course, building effective communication skills. These encounters are typically recorded so the medical student can watch the way he or she interacts with patients and make any necessary changes. The encounters are also typically viewed by other medical students as well as faculty members and other physicians to maximize the amount of feedback given. The ultimate goal is that early and effective practice of clinical skills while an individual is still in medical school will help them to become better doctors in the future, partially by increasing adeptness in what communication strategies work best. (“Standardized Patient Program”)

In a study conducted by Kevin Wright and a team of researchers that was published in 2006, the attitudes of medical students towards these kinds of communication skills training exercises as well as their knowledge of appropriate doctor-patient communication were analyzed. The study was conducted by surveying first and fourth year medical students of varying genders and ethnicities who attend medical school in the southern region of the United States. At this particular medical school, the students are required to take a four-year course that emphasizes communication skills pertaining to basic physical examinations and patient

interviewing as well as instruction on prevention, epidemiology, behavioral development, nutrition, medical ethics, culture, and professionalism. In the first two years, students participate in small group discussions and role play situations with faculty members whereas students in the last two years practice the skills they have learned while in their clinical rotations. Third and fourth year students are also required to attend workshops on particularly difficult topics such as palliative care, alternative medicine, HIV/AIDS, and how to give bad news. The goal was to prepare the students in the event they are faced with a similar difficult situation in practice as a physician. (Wright, et al. 2006)

The results of this study show that the medical students in their fourth year do not differ significantly from medical students in their first year in regards to their attitudes towards communication skills training or knowledge of appropriate doctor-patient communication techniques. However, the fourth year students show a significantly higher degree of confidence in their ability to effectively communicate with patients. As can be expected, those with increased positive attitudes toward this kind of training also show increased perception of its importance. Thus, they are also more confident in their communication abilities. Furthermore, it was seen that female medical students have more positive attitudes towards this kind of training and are more confident as well. (Wright, et al. 2006)

The importance of this study is primarily seen in its implications on the education of future physicians. Because medical school is most likely where physicians first come to the realization that their communication skills have a direct impact on the degree of their patients' satisfaction, their attitudes toward courses intending to hone these skills are of vital

importance. If a medical student has a negative attitude towards the course and doctor-patient communication strategies in general, he or she may begin to devalue their importance and fail to utilize the learned skills in practice one day. Though attitude plays a small part in degree of retention when it comes to these types of courses, the correlation is small enough to suggest that other factors could play a more important role on overall retention. Nevertheless, the results are significant enough to suggest that medical school instructors should present communication skills training courses as important and in as positive a light as possible in order to increase retention. (Wright, et al. 2006)

The courses mentioned above as well as student reaction to and participation in them prove to be a positive first step in the long process that will be decreasing the frequency of flaws in doctor-patient communication. One progressive program that is slightly different was developed by The Program in Communication and Medicine at Northwestern University's Feinberg School of Medicine. This program employs a set of videos known as patient narrative videos in which patients discuss their personal experiences with diseases such as diabetes, chronic pain, and those resulting in end of life issues. These patients also comment on their relationships and degree of communication with their physicians. The goal is to provide medical students with a better understanding of the way patients perceive their illnesses in hopes that this will allow them to better empathize and communicate with similar patients in the future. A similar program known as "In Their Own Words" was developed at the University of Iowa. Students attending this medical school are required to interview ten individuals about their experiences with illnesses and health care and later present these ten different perspectives. In their evaluation of the effectiveness of this program, student have revealed learning that

patients want their physicians to understand the point of view that comes only after living with a particular disease and to listen to what they have to say. The medical students have also learned that the physician's actions and words have more of an effect on their patients than perhaps they realize. Increased physician empathy and ability to relate to future patients is the ultimate goal of this program as well. Perhaps with programs such as these, more problems stemming from lack of proper doctor-patient communication can be eliminated. (Wright, et al. 2006)

**What can be concluded from all this information and what suggestions can be made for the future?**

In conclusion, health communication is a field that is growing in importance due in part to the myriad instances of patient dissatisfaction following consultations with their physicians. This can be explained by the fact that information and research regarding doctor-patient interaction and communication as well as overall patient satisfaction is extremely outdated and studies delving into these topics have only begun to be performed in the last few decades. Though each of these studies is different in its own way, they all generate the same results: patients are dissatisfied by their interaction with their physicians, the way their physicians use jargon they cannot understand, the way the interactions are not always patient-centered, and the way they oftentimes leave the physician more confused and with more questions than before. It is extremely important that physicians are aware that their patients are dissatisfied,

pinpoint exactly why that is, and correct any necessary problems because rates of overall patient dissatisfaction continue to climb.

One of the best ways to combat flaws in doctor-patient communication would be to implement various communications courses and activities into the medical school curriculum. Because few, if any, medical schools require communications classes as prerequisites in the undergraduate curriculum, perhaps the first year medical students could be required to take a basic communications class. This class could go into detail about effective communication techniques, how to read patient body language, how to make the interaction more patient-centered rather than physician-centered, as well as how to be an effective active listener when talking to their patients in the future. This knowledge could be built upon in a more personal way and become more than just theory in the second year of medical school if the students were required to complete a program such as the one currently used at the University of Iowa. If these future doctors were to hear from real people how it felt when the communication with their physician was flawed and how it negatively impacted their quality of life, perhaps they will be more aware of this in practice someday. These techniques and this knowledge could be put to use in the final two years of medical school if the students were to be critiqued on their interactions with patients in their clinical rotations as well as to practice interacting with patients with colleagues and faculty and being critiqued here as well. With all this knowledge learned from the class, empathy gained in hearing directly from patients, and practice and feedback obtained from finally interacting with patients themselves, the medical students might finally have all the necessary tools to better communicate with their patients in practice. In turn, the level of patient dissatisfaction would decrease as they received more qualities they

desire in a physician and communicated better overall; perhaps the level of positive health outcomes could increase as a result and the world could be a healthier place in which to live.

## Works Cited

- Beckman, Howard B., and Richard M. Frankel. "The effect of physician behavior on the collection of data." *Annals of Internal Medicine* 101.5 (1984): 692-696.
- Grohol, John M., Psy.D. "Become a Better Listener: Active Listening." Psych Central, 09 May 2016. Web. 9 May 2016.
- Korsch, Barbara M., and Vida F. Negrete. "Doctor-patient communication." *Scientific American* (1972).
- Ong, Lucille ML, et al. "Doctor-patient communication: a review of the literature." *Social science & medicine* 40.7 (1995): 903-918.
- Orth, James E., et al. "Patient exposition and provider explanation in routine interviews and hypertensive patients' blood pressure control." *Health Psychology* 6.1 (1987): 29.
- "Principles of Medical Ethics." *AMA Code of Medical Ethics*. American Medical Association, June 2001. Web. 9 May 2016.
- Rimal, Rajiv N., and Maria K. Lapinski. "Why Health Communication is Important in Public Health." *Bulletin of the World Health Organization*. World Health Organization, 2009. Web. 26 April 2016.
- Sebastian, N. M., et al. "Gaps in doctor patient communication: a community based study." *International Journal of Community Medicine and Public Health* 3.1 (2015): 264-269.

Simpson, Michael, et al. "Doctor-patient communication: the Toronto consensus statement." *BMJ: British Medical Journal* 303.6814 (1991): 1385.

"Standardized Patient Program." *Simulation Center*. Johns Hopkins Medicine, 2016. Web. 26 Apr. 2016.

Starfield, Barbara, et al. "The influence of patient-practitioner agreement on outcome of care." *American Journal of Public Health* 71.2 (1981): 127-131.

"What Is Communication?" National Communication Association, 2016. Web. 26 Apr. 2016.

"What Is Health Communications?" *Gateway to Health Communication and Social Marketing Practice*. Centers for Disease Control and Prevention, 10 May 2011. Web. 26 Apr. 2016.

"What Is the IRB?" Advocate Health Care, n.d. Web. 9 May 2016.

Wright, Kevin B., et al. "Medical student attitudes toward communication skills training and knowledge of appropriate provider-patient communication: a comparison of first-year and fourth-year medical students." (2006).