5-2021

Disease Cured in the Least Expected Way: Communication.

Bailey Pickering
South Dakota State University

Disease Cured in the Least Expected Way: Communication.

Bailey Pickering

Biology & Microbiology Department

South Dakota State University

Abstract

Communication is an important factor in all doctor-patient relationships. This non-technical skill could potentially lead to better patient wellness outcomes. Since communication proficiencies are not a basic skill for everyone, most complaints about doctors are because of communication issues. However, the decline in communication skills begins early in a doctor's career – in medical school. With increasing communication showing proven benefits, doctor's communication abilities are vital to improving their patient's wellness outcomes. Gaps in current literature include exactly how much communication benefits patient wellness outcomes. This literature review will fill in some of those gaps and also highlight what factors lead to doctor-patient communication break downs, how to avoid communication conflicts, and what factors of communication are most important between a doctor and the patient.

Key Words: outcomes, doctor-patient, patient wellness, health

Introduction

Doctors communicate with countless people each day, both patients and interdisciplinary staff. Doctors need to use effective communication to work with a team of health professionals (Mahdi Hazavehei and others 2015). Most importantly, it is important for doctors to clearly and concisely convey their patient's diagnosis or treatment plan. Studies are in agreeance; better communication brings many benefits to the medical field, but it is unknown of exactly how much of a benefit. Overall, it is known that better doctor-patient communication leads to better patient wellness outcomes.

By identifying what specific measures can be taken to lead to better patient outcomes, doctors will be able to communicate a diagnosis, results, and treatment plans more effectively. Another key to better communication is finding breakdowns or barriers in the process; pinpointing the specific issue is the first step to fixing the problem. Finding which components of communication are the most crucial between doctors and patients will also help doctors purposely improve upon those aspects. Also, potentially implementing a patient-centered or relationship-centered care to a doctor's practice may be beneficial for both parties and increase patient satisfaction. Additionally, doctors will need to focus on topics such as self-disclosure, personal fears, and how to break bad new to patients. They may also need to utilize alternate methods of communicating such as infographics or telemedicine. Effective training can be implemented to properly train doctors and improve their communication skills.

Materials and Methods

The materials and methods will include a comprehensive literature review of doctor communication studies, published patient surveys, and other collected data. To compare communication styles, the experimental design will look at quantitative and qualitative data by looking at different variables. These different variables will include data, such as patient satisfaction surveys and patient wellness outcomes. More information will emanate from qualitative data from peer-reviewed sources. Since this is a literature review, any replications will be accomplished by reviewing the peer-reviewed sources cited throughout the paper. Source and selection criteria came from searching keywords such as "doctor communication," "doctor-patient communication," and "medical communication" into the NCBI database.

Satisfaction and Early Problems

The central goal of all doctor-patient communication is to improve the care for the patient and the patient's overall health (Ha and Longnecker 2010). Communication skills are not a basic ability for everyone, which leads to communication breakdowns. This is why most complaints about doctors are not related to clinical competency, but rather are complaints about communication issues (Ha and Longnecker 2010). This is understandable because patients put the most value in receiving treatment from skilled nurses and doctors, who can communicate well, in a safe environment (Wessels and others 2010).

Unfortunately, there is a lack of communication in healthcare and it is not a new issue. Overall, the American health care system was rated as fair or poor by 70% of respondents. However, Americans surveyed were 88% satisfied with their physicians and the care they receive (DiMatteo 1998). This shows that the profession as a whole is rated lower than individual

physicians. Respondents rated their physicians to have lower communication skills compared to other skills, but the study does not mention the other skills the communication skills are compared to. Finding this data is surprising because communication is rated as one of the top three most important skills physicians must have. Ratings from respondents were also not affected by age or gender of physician and/or patient, or similarity or difference between physician and patient (DiMatteo 1998).

Sadly, this problem with communication begins early in a doctor's career. As medical students advance in their education, their communication skills have an inverse relationship to their learning, as communication skills tend to decline while in medical school (Ha and Longnecker 2010). This is a major concern because nearly 60% of a doctor's time while in the clinic is spent communicating in the manner of simply talking (Coiera 2006). Another important note is that one of the medical student's most imperative factor is their ability to communicate properly. Their ability to communicate will affect their quality of learning as well as improve their performance when it comes to the clinical environment (Mahdi Hazavehei and others 2015).

Studies have been done in the past and have seen communication improvements from interview skill training during medical school. As seen in Figure 1, a study from Maguire and others in 1986 showed that doctors improve their interviewing skills from the time they were a student to the time they were a practicing physician. The control group without any formal interviewing training only improved by 25%, whereas the group with training improved by 35% (Maguire and others 1986). The trained group was also considered by patients to be more empathic and competent compared to their control doctors. Additionally, the trained group were regarded as more self-assured and warmer (Maguire and others 1986).
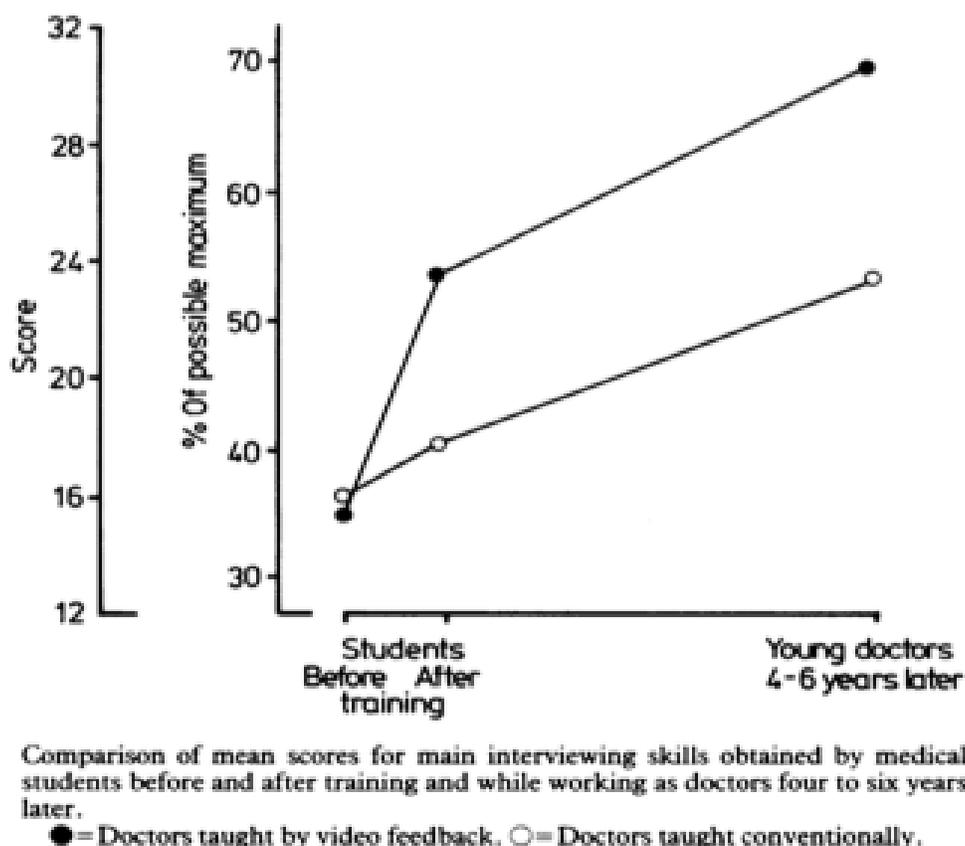
Comparison of mean scores for main interviewing skills obtained by medical students before and after training and while working as doctors four to six years later.
● = Doctors taught by video feedback. ○ = Doctors taught conventionally.

Figure 1. Interviewing skills improved in medical students with training compared to medical students without training (Maguire 1986).

A more recent study also found similar results. Communication skills were found to have unfavorable results in auditory, verbal, and feedback levels in medical students. This is why students must be taught better communication skills with an emphasis on understanding cultural differences (Mahdi Hazavehei and others 2015). In a study done at a single medical school, it was found that even short-term interventions dealing with interpersonal sensitivity were even beneficial (Hall and others 2009).

With options such as telemedicine and advanced technology being introduced, the communication channels are increasing (Coiera 2006). Communication over varying media is just as important as face-to-face interactions for doctors and patients. This makes communication skills and formal training in the matter more imperative than ever for doctors.
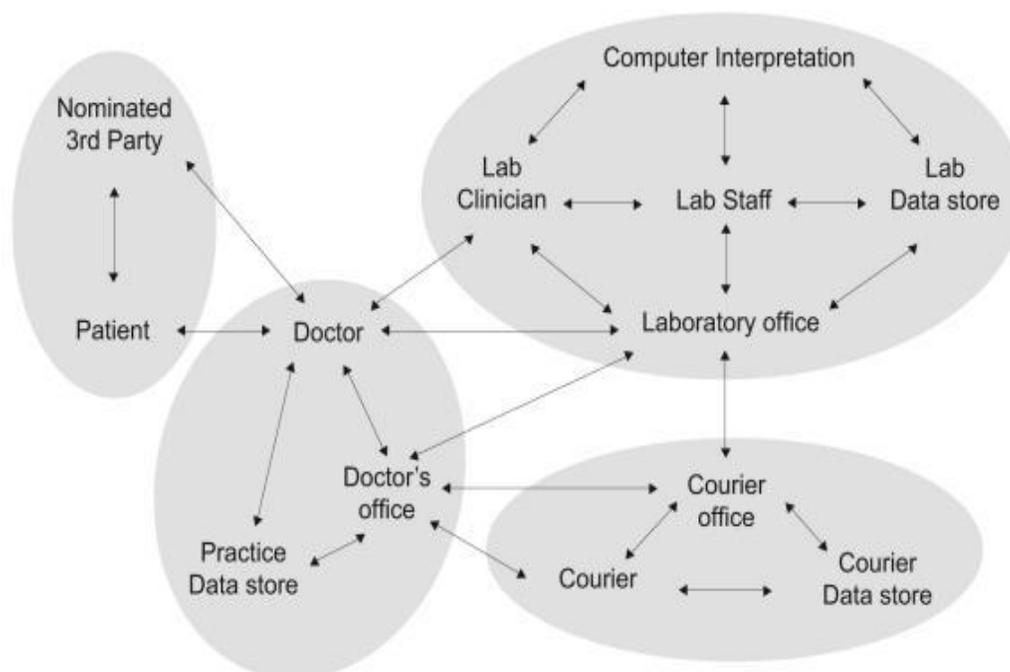
Figure 2. Coiera (2006) demonstrates a possible communication pathway a single laboratory test can take.

The primary literature agrees that communication is important, it also agrees that measuring how well people communicate in healthcare is a complex process (Calderón and Beltrán 2004). Health communication is complex in itself because doctors have to worry about more than just finding out what is wrong with the patient and then treating it. Doctors also have to be concerned

about other variables, such as government policies, ethno-social realities, and institutional directives, just to name a few (Calderón and Beltrán 2004).

A doctor communicating with a patient is not the only communication method that can produce improved patient wellness outcomes. Doctors must also possess the ability to communicate and work as a team with interdisciplinary medical staff (Casali and others 2019). In a study about Major Depressive Disorder (MDD), patient and clinician communication positively correlated with a better patient outcome (McNaughton and others 2019). MDD patients who had increased communication had a better treatment outcome (McNaughton and other 2019). Another study refers to communication skills falling under the category of non-technical skills. The study highlights non-technical skills as a key component in high-risk industries and healthcare (Casali and others 2019). Yet, a third study references how poor health communication leads to not only worse patient wellness outcomes, but also less access and lower quality of care (Calderón and Beltrán 2004).

Knowing that increased patient satisfaction proves to produce better patient outcomes (Wessels and others 2010), it is logical to look at the demographics of those who rate highly on patient satisfaction questionnaires or surveys. Patient satisfaction questionnaires and surveys have rapidly increased over time to measure the care being given from the patient's perspective. A study found that it is typically older patients who are more satisfied with their care. Usually, patients with no or only primary education will feel more satisfied as well. Quintana and others in 2006 found some contradicting results in their study, typically those who are cohabiting or married have higher satisfaction ratings, but in this study divorced or single patients rated higher satisfaction in the areas of comfort, cleanliness, and visiting. They showed the common results of men being more satisfied than women and working status did not affect ratings. Additionally,

patients who had already had a previous admission to the hospital, as well as patients with a longer length of stay, rated lower levels of satisfaction (Quintana and others 2006).

Most of Quintana's and other's results from 2006 make sense logically. It also confirmed previous studies' findings that sociodemographic characteristics do influence patient satisfaction levels. Another key to satisfaction rates is how the survey or questionnaire is administered, typically mail interviews received the most responses (Quintana and others 2006). The doctor can also approach the patient in a positive way rather than a negative way. This will help patients with minor illnesses have greater satisfaction as well (Thomas 1987).

Key Factors of Communication

When a doctor can communicate more effectively, both their patients and their self benefit. Doctors who are good at effectively communicating with patients can more accurately identify the patient's problems, while the patient is ultimately more satisfied with the care that they receive. The patient will also adjust better psychologically if effective communication is used (Maguire and others 2002). There are three key components to effective communication: verbal, non-verbal, and paraverbal messages. Verbal communication refers to the actual content and selection of words in the message. Next, non-verbal communication pertains to components of body language such as gesture, facial expression, posture, and spatial distance. Lastly, paraverbal communication concerns components of voice such as pacing, tone, pitch, and volume (Ranjan and others 2015).

Some barriers to utilizing these key communicating factors tend to be a lack of knowledge or training when it comes to communication skills. Neglecting any of the three key components of effective communication could prevent the full message from being received

(Ranjan and others 2015). Specifically, better nonverbal communication has been connected to increased patient satisfaction (Griffith and others 2003), which would be beneficial because, as it was previously discussed, increasing patient satisfaction can lead to better patient outcomes (Wessels and others 2010). Without communication, effective health care would not be able to be delivered.

The reason each of these components is significant is that treating a patient is a holistic approach (Ranjan and other 2015). This means doctors must go beyond only treating the disease, which is where the communication aspect ties in. Doctor-patient communication is vital because it leads to improved health outcomes and quality of care (Ha and Longnecker 2010). Another reason these key components are significant is that there has been a shift from high to low communication context. High context communication is dependent upon more than just the verbal message to decipher the true meaning. Nonverbals, as well as environmental cues, play a major role in high context communication. Whereas low context communication focuses solely on the verbal message. Another surprising note is the lack of medical communication literature that focuses on nonverbal behavior considering how central it is for the care process (Roter and others 2006).

While keeping the key factors of communication in mind, there are key tasks for this process as well (Maguire and others 2002). The key factors will become more and more important with a shift from high to low communication context, so having explicit tasks for effective communication will be beneficial overall. These steps are similar to breaking bad news which will be talked about later in the Fear and Bad News section. The key tasks are:

- Eliciting the main problems that the patient has, their perceptions, and the emotional, social, and physical impact it will have on both the patient and their family

- Tailor information based on what the patient wants to know, while continually checking for understanding

- Eliciting how the patient reacts and their main concerns about the information

- Determine if the patient would like to be part of the decision-making process with treatment options; and,

- Discuss all treatment options and make sure the patient understands any implications

Unfortunately, many doctors usually fail with key tasks. Typically, doctors do not acquire much information about perceptions the patient has about their problems. They many times do not elicit any emotional, social, or physical impacts that the problem may pose on the patient or their family. Lastly, little attention is usually paid into seeing how well the patient understood what the doctor told them (Maguire and others 2002). The reasons for these deficiencies stem from inadequate undergraduate or postgraduate training in communication skills so doctors are not equipped with the skills to effectively communicate with their patients (Maguire and others 2002).

Patient-Centered and Relationship-Centered Care

Patient-centered care revolves around the patient being an active participant in their care (Gordon and Street 2016). A patient's satisfaction is a critical part of patient-centered care (Zgierska and others 2014). More clearly, it can be defined as care that respects each patient's needs, values, and preferences while making sure those things guide the patient's decision (Wessels and others 2010). The doctor must provide information to the patient while also encouraging the patient's active involvement. To achieve patient-centered care, a doctor must be

very clear, supportive, and informative for the patient (Gordon and Street 2016). This specific type of care requires a doctor to know how to communicate in a way where the patient wants to be part of their care and treatment.

Many researchers, as well as medical educators, advocate for doctors to use a patient-centered approach (Swenson and others 2004). This is why we have seen many health care organizations making an effort to give care concerning the patient's wishes as much as possible (Wessels and others 2010). Doctors who are more patient-centered typically regarded as a better communicator and the patient is overall more satisfied and more likely to follow the treatment plan (Street and others 2007). However, there has been debate over if patients prefer patient-centered communication styles over the traditional biomedical communication style. 250 English-speaking adults were recruited for a study and watched two video scenarios if a patient-doctor discussion about complementary and alternative medicine (CAM), one video used the patient-centered communication style, and one video used the biomedical communication style. After watching the videos, the adults completed both oral and written questionnaires for researchers to determine which style was preferred. The group selected for the study was ethnically diverse, gender-balanced, healthy, relatively young with a median age of 39, and a range from 18 to 85, as well as educated with the majority have at least some college (Swenson and others 2004).

It was found that patients who preferred a patient-centered communication style tended to already have a patient-centered doctor, were typically younger, more educated, and already used CAM. It was found that females are also more prone to wanting to play a bigger part in their care than males are (Hamann and others 2007). Gender is something doctors should consider when providing care because of gender communication styles are different (Wessels and others 2010).

These patients also rated a "doctor's interest in you as a person" to be "very important" (Swenson and others 2004). Overall, the conclusions of the study found that 40% of patients still prefer a biomedical communication style, compared to 60% who prefer the patient-centered communication style. Doctors should try to be flexible and base their communication style off of the individual patient and be flexible with doctor-patient communication (Swenson and others 2004).

A different study found similar results as the previous study mentioned, typically, younger, more educated, and most often females have a greater desire to be part of their care. This same study also found that there is no clear distinction on whether people with chronic or acute conditions show a preference to be part of their care, except for multiple sclerosis (MS) patients. Conditions that were part of the study were: hypertension patients in a primary care setting, depression patients in a primary care setting, breast cancer patients in a university hospital setting, schizophrenia patients in state or university hospital settings, multiple sclerosis (MS) patients in a university hospital, and minor traumas in the emergency department. MS patients showed a significantly higher preference for participating with their care than other diagnostic groups, but the reasons for this were not clear from the study (Hamann and others 2007).

Relationship-centered care (RCC) differs slightly from patient-centered care because RCC is defined as care in which all parties appreciate the importance in the relationships they have with each other (Beach and others 2006). It can be reflecting both the feeling and knowledge the doctor and patient bring from their past experiences and perceptions (Roter and others 2006). The emphasis on relationships stems from a meta-analysis that discovered patients who are treated by doctors who are good communicators are twice as likely to adhere to their

treatment plans. They also have improved psychological and physical outcomes when it comes to both psychological and physical illnesses (McCabe and Healy 2018).

There was some question that if there was such a push to practice patient-centered care, what were doctors practicing before: doctor-centered care? This is why RCC came to be. The main focus is the doctor-patient relationship, however, the relationship the doctor has with others as well as with themselves is also a key part to RCC (Beach and others 2006). RCC is built on these four main principles:

- Relationships formed in healthcare should incorporate the personhood of the people involved

- Emotions and the effect that they have are central parts of the relationships formed

- There is reciprocal influence with all health care relationships

- Forming and maintaining genuine health care relationships brings moral value to both parties.

The first principle aims to have both the doctor and patient recognize they are unique individuals with each having their own set of perspectives, experiences, and values. It highlights authenticity and allows the doctor to be more aware of their reactions, biases, or emotions more so than they would in patient-centered care (Beach and others 2006). In the second principle, emotions are acknowledged as understudied when it comes to medical encounters. However, outside of medical studies have shown that improved use and understanding of emotion by doctors could potentially improve medical care operations and outcomes (Beach and others 2006).

In the third principle of RCC, demonstrates the importance of how RCC is equally as important for the patient as it is for the doctor. The doctor will benefit in ways such as being able to grow as a result of utilizing RCC. An Aristotelian "friendship" connecting unequal's should not be the aim of RCC, but rather an Aristotelian "friendship" with a foundation on virtue should be strived for. The latter type of relationship will allow both the patient and the doctor's character to develop while reaching toward moral virtue. The patient still takes priority, it is just acknowledged that the doctor also benefits. Finally, the fourth and final principle of RCC describes genuine relationships are desirable due to the moral foundation it has (Beach and others 2006).

One of the key objectives the Association of American Medical Colleges requires medical school education is that students have population-based knowledge as well as the skills. This is important because this knowledge and these skills will improve patient reports, which are used to evaluate professional certification and re-certification, residency programs, and organizational accreditation within some disciplines (Beach and others 2006). This is why focusing either on patient-centered care or RCC is important and whichever type of care is chosen, it will ultimately benefit both the patient and the doctor.

Physician Self-Disclosure

When building rapport or trust with patients, doctors sometimes use self-disclosure. However, there is a controversy of what is okay to self-disclose and what is a boundary violation (Beach and others 2004). The arguments made against self-disclosure claim that a patient should not be used to satisfy a doctor's needs for sympathy or comfort. Also, an extreme argument is a slippery slope that argues too much self-disclosure from a doctor to a patient is a typical starting

point for a sexual relationship with the patient. However, this argument is unsupported by any evidence found from the study (Beach and others 2004). To better categorize self-disclosure statements and better identify which types of statements are beneficial versus unnecessary Beach and others did a qualitative analysis in 2004. This analysis included following primary care physicians and surgeons and categorized self-disclosure statements into nine different types.

The most common type of statement fell under reassurance, there were then broken up into short and long reassurance statements. Additionally, Beach and other's study briefly mentioned another earlier work within a pediatric context which showed reassurance did not affect maternal concerns or satisfaction with the visit. Counseling and then rapport building self-disclosure statements were the next most common (Beach and others 2004). Rapport building was split into two categories: humor and empathy/legitimation. The other categories self-disclosure statements could fall into were causal, intimacy (emotional/physical), intimate (relationship), and extended narrative. The study is transparent about the limitations of the study, such as disagreement could arise when categorizing disclosure statements. Another limitation was that self-disclosure statements were only included in the study if they were made during the medical chatting, meaning the typical beginning and end of a medical visit, which usually includes social disclosures, were not included in the study (Beach and others 2004).

It was found that 15.4% of doctors participating in the study utilized self-disclosing statements during medical chatting (Beach and others 2004). Typically, the statement was spontaneous and not prompted in response to a patient's question. There was also little difference in the data between primary care physicians and surgeons who took part in the study. In the conclusion of the study, physician self-disclosure was found to be a complex behavior that should not be considered to be one entity. In routine office practice of both surgeons and primary

care physicians, an overwhelming majority of the self-disclosure statements do not seem to demonstrate a danger to patients. Specific types of disclosures will need to be pinpointed when helping guide doctors on how self-disclosure can be used to optimize their patient's relationship (Beach and others 2004).

Fear and Bad News

Unfortunately, not all patients receive good news. Due to the sensitivity of certain conversations, there should be an adjustment to the medical school curriculum to make a greater emphasis on breaking bad news to patients (Buckman 1984). "Bad news" is any information that will have a devastating effect on one's life and it is highly dependent on the patient's understanding and expectations of the news (Ranjan and others 2015). Three overriding steps must be considered when breaking bad news to a patient. A doctor must be congruent and genuine when giving the news, offer unconditional positive regard, and empathetically understand to fell and communicate on a deeper level (Narayanan and others 2010). However, there can be some fear surrounding these steps as doctors may not feel prepared to give the bad news. Buckman believes that doctors may fear to break the bad news because of a few reasons such as:

- Fear of being blamed
- Fear of causing the patient to unleash a reaction
- Fear of having to use the untaught skill of breaking bad news
- Fear of expressing their own emotions
- Fear of not knowing all the answers
- Personal fear of illness or death

Many of these fears subside as a doctor gains experience, however, they can persist throughout a doctor's career. The fear of being blamed stems from a natural human reaction. If a police officer pulls someone over and gives them a speeding ticket, the officer will be blamed. It is a natural human reaction to blame the bearer of bad news. Thus, a doctor may fear a patient may personally blame them for the bad news they receive. Sadly, the closer a doctor and patient relationship, the easier it is for the doctor to allow the patient to personally blame them (Buckman 1984).

There should a greater emphasis on teaching how to break the bad news to patients, because doctors may fear they are not equipped to break the bad news. The more awkward a situation is, the more people will try to avoid the situation, which for doctors, avoiding an awkward situation may not work (Buckman 1984). For example, if a doctor has to break news to a patient that they are dying, the doctor may have anxiety or insecurities due to not having proper training on how to break the bad news. A doctor may also be afraid that the patient will unleash a reaction, nobody wants to be the doctor that makes people cry. It makes a doctor feel as though they failed and the did not do the correct things to prevent the patient's reaction. "Sorry" is typically a word to express sympathy and taking responsibility. However, a doctor must express sympathy without accepting the responsibility, and this is a difficult skill to master (Buckman 1984).

Turning to the doctor's perspective, it can be difficult to not express emotion. Doctors are trained to remain calm in emergencies and suppress feelings of panic or any hostility that may occasionally be felt toward a situation or patient (Buckman 1984). It can also be difficult to say, "I don't know." After extensive education and training, it may be difficult for a doctor to say they do not know the answer. The more junior the doctor, the harder it may be to admit not

knowing something. All in all, breaking bad news is a skill, not a divine gift (Buckman 1984). Disclosing bad news is a complex art and many doctors lack competence and confidence in their ability to communicate bad news (Ranjan and others 2015). This is why improving communication skills with some sort of training will ultimately benefit the patient, and potentially their wellness outcomes.

Ranjan and others in 2015 broke down breaking bad news into six distinct steps:

- Be primed for the interview

- Assess the attitude and knowledge of the patient

- Assess the level of information and details the patient desires

- Breaking the bad news

- Address the emotions the patient might have

- Give the treatment plan and summarize

Step one is getting prepared for the interview. The article suggests rehearsing the encounter mentally beforehand as well as remaining relaxed around the patient and maintaining eye-to-eye contact while avoiding interruptions. Another aspect of the first step is to allow the patient to decide if they would like somebody to be with them when the discussion is happening. The next step is to assess the patient's knowledge and attitude by asking open-ended questions and seeing what the patient's perceptions surrounding the bad news are. The third step ties into the second step because the doctor has to assess how much the patient wants to know about their diagnosis, prognosis, or any other details.

The fourth step is the difficult step as the doctor has to break the bad news. In the article, Ranjan and others note it may be easiest to break up the information into non-technical and

simpler words, along with giving the information in smaller portions. After the bad news is broken, the patient's emotions must be addressed, and the doctor must show support and have an empathetic response. Finally, the treatment plan must be given and a summary of what was discussed as well.

However, there are multiple protocols for breaking bad news. A few of which are remembered through acronyms. Many of the steps are similar and overall have the same goal. First, there is the SPIKES protocol as seen in Figure 3. Second, there is the ABCDE model as seen in Figure 4.

S-Setting up interview
P-Assessing patient's perception
I-Obtaining the patient'sinvitation
K-Giving knowledge and information to patient
E-Addressing the patient's emotions with empathetic response
S-Strategy and summary

Figure 3. SPIKES protocol for breaking bad news (Narayanan and others 2010).

A-Advance preparation
B-Build a therapeutic environment/ relationship
C-Communicate well
D-Deal with patient and family reactions
E-Encourage and validate emotions

Figure 4. ABCDE model for breaking bad news (Narayanan and others 2010).

Narayanan and others in 2010 proposed a different model with the acronym "BREAKS": B – Background, R – Rapport, E – Explore, A – Announce, K – Kindling, S – Summarize. This mnemonic is easy to memorize and can be effectively integrated into a doctor's practice. No matter what protocol or model a doctor chooses to utilize for breaking any bad news, they all have common elements. Each model has the doctor doing some type of preparation, along with breaking the bad news, dealing with emotions as well as patient perceptions. There is not agreeance on if a certain model is superior to others, as long as it covers the same basic steps that every model incorporates. Having these steps will be beneficial because a study done on palliative care cancer patients found that patients and families were most dissatisfied with the communication process when it came to their end of the life care process. Patients were especially dissatisfied right away with the original disclosure of the diagnosis and concerning the sensitive topic of the prognosis (Kirk and others 2004).

Barriers to Good Communication

The most important barrier when it comes to doctors communicating with patients is a lack of insight because of inadequate training in communication skills (Ranjan and others 2015). This barrier inhibits the holistic treatment of both the patient's medical problem as well as their well-being. Additional barriers could include but are not limited to, non-verbal messages not receiving proper attention, a language barrier, or inadequate knowledge about treatments or diseases. Doctors could also experience human failings such as lack of time, stress, or tiredness due to possibly working in an overburdened setting (Ranjan and others 2015).

Additionally, because doctors tend to not feel equipped with the proper communication skills, they sometimes can resort to blocking behavior methods or are not able to acquire the

necessary information from the patient (Maguire and others 2002). Blocking behavior can be defined as blocking further disclosure in response to certain emotional cues. It can be presented as offering advice to a patient or reassurance before identifying any of the main problems. It can also be in the form of a doctor explaining away any distress as "normal" or only attending to physical features of the issue. Furthermore, switching the topic or "jollying" along the patient can be forms of blocking behavior (Maguire and others 2002). It is speculated of this blocking behavior could stem from the lack of attention to emotion when it comes to the care process (Roter and others 2006).

The next barrier for effective communication can be if a doctor does not realize the patient is withholding important information. Some reasons a patient might withhold information about their problems maybe because they have a belief nothing can be done for their issue or do not want to burden the doctors. Other reasons may be due to a desire not to seem ungrateful or have feelings that they are pathetic. A patient might also not feel their concern is legitimate so do not mention it, or possibly worry their fear of what could potentially be wrong will be confirmed. Lastly, a doctor's blocking behavior may be a reason a patient does not fully disclose their problems (Maguire and others 2002).
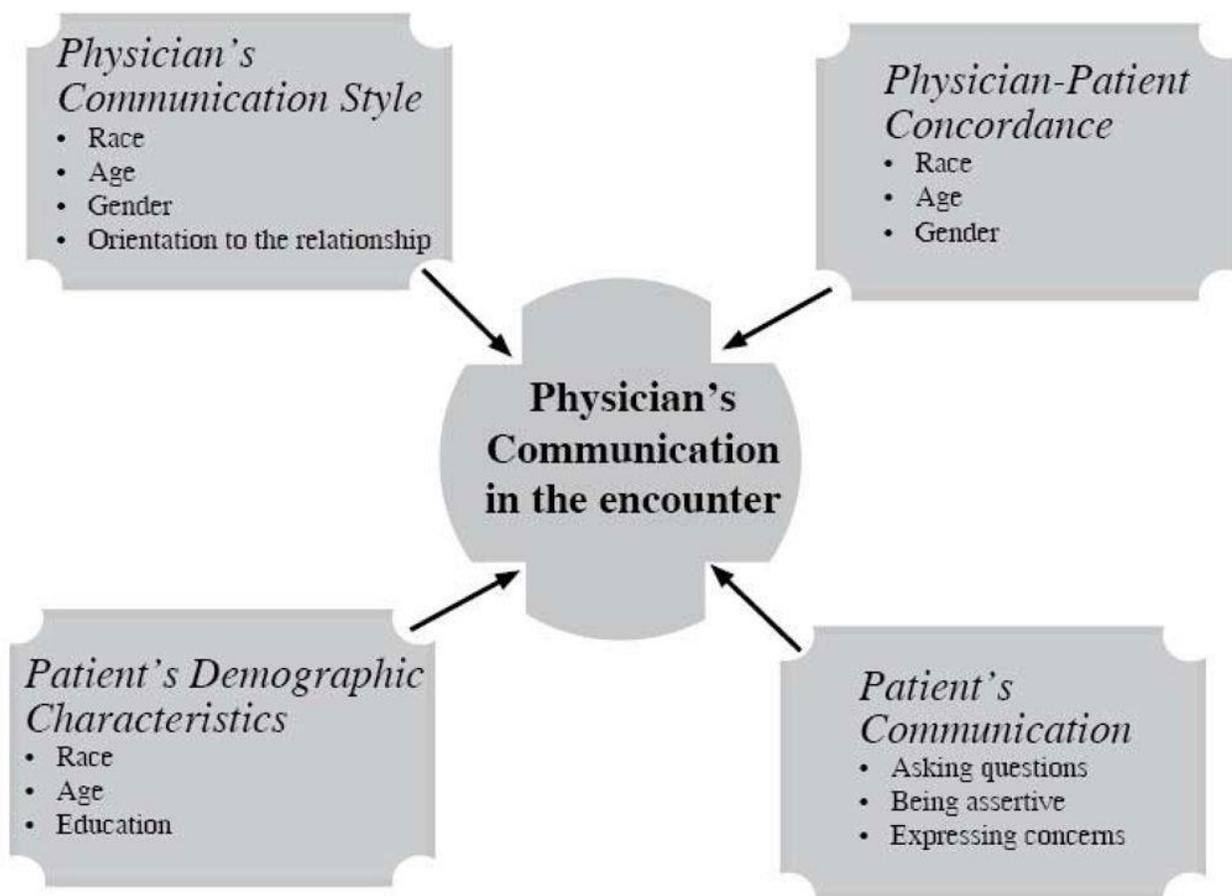
Figure 5. Shows possible things that might influence a doctor's communication (Street and others 2007).

Some additional barriers tie back into patient-centered care. Patients who are more active with their care generally receive a greater quality of care. The quality of care patients depends partially on a doctor's communication skills, so if a patient is more actively asking questions and volunteers more information about their problem, the doctor will be able to better treat them. It is generally inferred for this next study that the more information a doctor gives a patient, the better the treatment may be. In a single study in a large southern US city, it was found that generally younger, better educated, white patients obtained more information from their doctor because they tend to give more information as well as ask more questions. White patients received more

information than African American patients received because they were less assertive and typically did not ask as many questions as white patients did (Street and other 2007). This discrepancy of information sharing based on race has its limitations from this study. As Street and others point out, their sample size was based slightly more than 200 interactions in a large southern US city. It is specifically pointed out that it is perhaps too localized and too small of a sample to say this is true for other areas as well (Street and others 2007).

Another barrier that has an unclear relationship with patient outcomes and satisfaction is gender. Some studies have found that gender has an obvious connection with satisfaction, while other studies have not found this. Finding some connection between gender and satisfaction would make sense because men and women typically differ in thinking when it comes to memory, problem-solving, or dangers or threats. This would suggest there would be some differences when concerning healthcare as well (Wessels and others 2010). A study of 150 medical students and 51 physicians found that communication style is gender-dependent and effected by stereotypes. Results from this particular study were conducted including both medical students and physicians to gather both of their insights. It found that females had more interest in doctor-patient communication and its positive effects on patient outcomes. Females also tended to have a more positive attitude when it came to doctor-patient communication than males did. Additionally, female doctors had a more patient-centered attitude (Löffler-Stastka and others 2016). Overall, gender does have an impact on communication style, it is unclear how much of an impact it truly has though.

Effective Training

Medical students need to learn communication skills, effective training of these skills requires the expert design of the curriculum. They are necessary for expressing needs or emotions. It is also important to point out that communication skills are both learnable and teachable. (Mahdi Hazavehei and others 2015). There are many methods considered effective when it comes to communicating efficiently between doctors and patients. While biomedical science should still be the foundation of medical education, it is becoming more evident that knowing patient preferences as well as having a way to measure patient satisfaction should also be incorporated into the medical school curriculum as well as residency training (Beach and others 2006). Namely, because increased patient satisfaction is associated with better patient outcomes (Wessels and others 2010).

Any form of effective teaching methods will offer evidence of any current insufficiencies in communication, along with the reasons for them and present the consequences for both the patient and the doctor. There will also be evidence of the skills needed to overcome the insufficiencies. An opportunity to practice learned skills in a safe and controlled environment and an ability to demonstrate skills that will show a doctor can elicit reactions from patients. Lastly, constructive feedback on their performance and time to reflect will be necessary for effective teaching methods (Maguire and others 2002).

There are three components according to Maguire and others, in a 2002 article, that any workshop or course must include being a good course of learning communication; these components are cognitive input, modeling, and practice of the key skills. Cognitive input is defined by the article as providing detailed handouts or possibly a short lecture, or even both.

Evidence of current communication shortcomings, as well as the reason behind them, will need to be given. The adverse consequences the issue has for both the patient and the doctor will need to be demonstrated as well. Modeling would be the trainers demonstrating the key skills in action, either prerecorded or as an interactive demonstration with an actor as the patient. The live demonstration would allow for immediate feedback as well as confirming or refuting the group's suggestions or perceptions. The final skill of effective training would be given the ability to practice the key skills learned. The opportunity would allow feedback and be conducted with actors simulating the patients. Moreover, guidelines for the simulation should also be outlined beforehand (Maguire and others 2002).

Another model of properly teaching effective communication claims that two main themes should be considered when making a program for medical students. The two themes are diversity within the current communication skills training as well as any administrative requirements necessary for the training program. It is recommended that each medical school tailors their communication skills training for their students with a stress on importance in the clinical setting (Mahdi Hazavehei and others 2015).

There has been an awareness brought throughout medical schools on the importance of teaching communication skills. The Association of American Medical Colleges (AAMC) has placed great importance on implementing course work to improve communication skills in future doctors. Medical students must master these skills to be successful because it has been found that during training, instilling better communication skills has been successful worldwide (Mahdi Hazavehei and others 2015). It is also recommended that there be formal instruction specifically on nonverbal communication during residency, as nonverbals have significant importance when providing care (Griffith and other 2003). There has been a general agreement on the importance

and usefulness of these skills. Even the World Health Organization (WHO) now recommends using specific cultural requirements for proper communication training during medical education (Mahdi Hazavehei and others 2015).

Other Communication Modes

Modern medicine historians have seen an unquestionable decline in face-to-face communication through the care process (Roter and others 2006). This is why it will be important to find other ways for doctors and patients to potentially communicate. Another way to communicate and potentially avoid any barriers is through infographics. Infographics are meant to be innovative and engage the viewer visually while communicating in a concisely and colorfully. They are sometimes used for public health messages aimed toward the general population. There is evidence to suggest that infographics way of representing information enhances understanding and ultimately aids in the ability to make decisions (McCrorie and others 2016).

The concept of infographics is a way to graphically present information and has existed as far back as the eighteenth century. Some of the earliest infographics were designed for people with poor numeracy or literacy. Today, they are utilized for the general public who is oftentimes unable or unwilling to focus on a lengthy piece of information long enough to fully comprehend it (McCrorie and others 2016). In a health care aspect specifically, infographics are increasing in demand particularly among the baby boomer generation. As this generation ages, they will develop a greater risk for illness and will require quality healthcare information to assist them in making informed decisions regarding their care. Infographics can also help potentially overcome a language barrier (McCrorie and others 2016).

Infographics do have some limitations though. For example, if a person does not speak English or English is not their first language, they could potentially misunderstand an infographic and take the information too literally. An example would be an infographic depicting apples and the number of apples corresponds to how many fruits you should eat in a week. However, it could be misinterpreted as one must eat specifically that many apples each week.
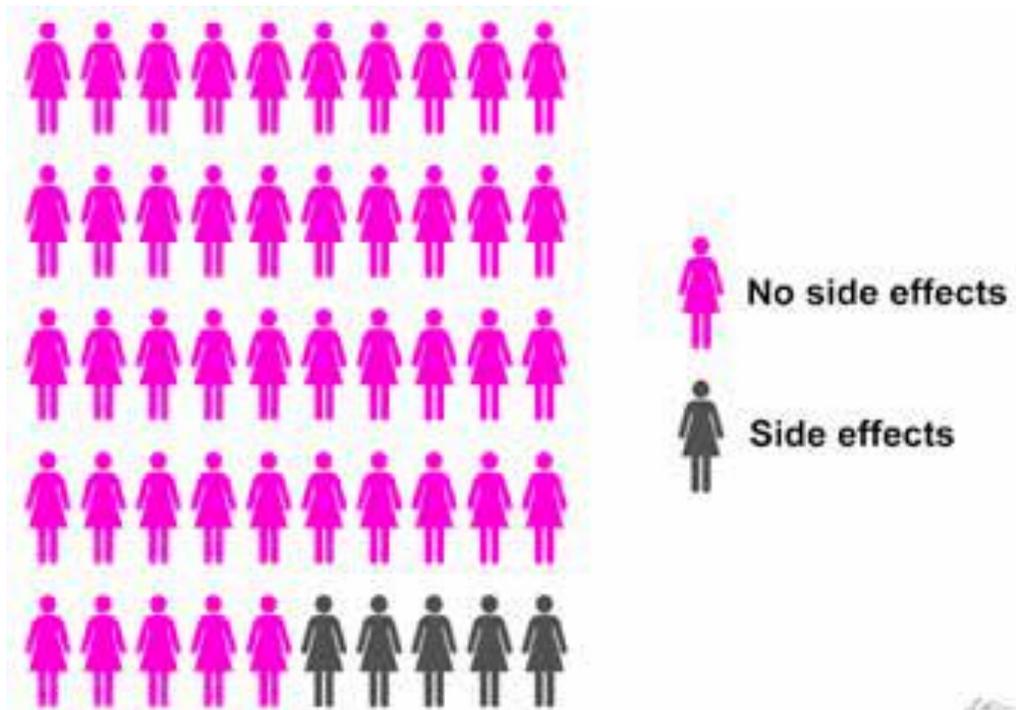

Figure 6. Infographic depicting females figures with and without side effects as an example (McCrorie and others 2016).

Figure 6 depicts an isotype array infographic that leaves room for another potential misinterpretation. Since only women are depicted, it could be mistakenly implied that the disease is gender-specific (McCrorie and others 2016).

Another common type of infographic is charticles. Attractive colors, graphs, or charts, and easily understood text are combined to form a common message in response to viewers

possibly not having enough patience or time to read and comprehend a lengthy text. Pie charts are familiar to most people so they are commonly used. Fractions always have the same denominator so 1 in 3 is not incorrectly interpreted as being smaller than 2 in 6. All wording is easily understood by the general public (McCrorie and others 2016).
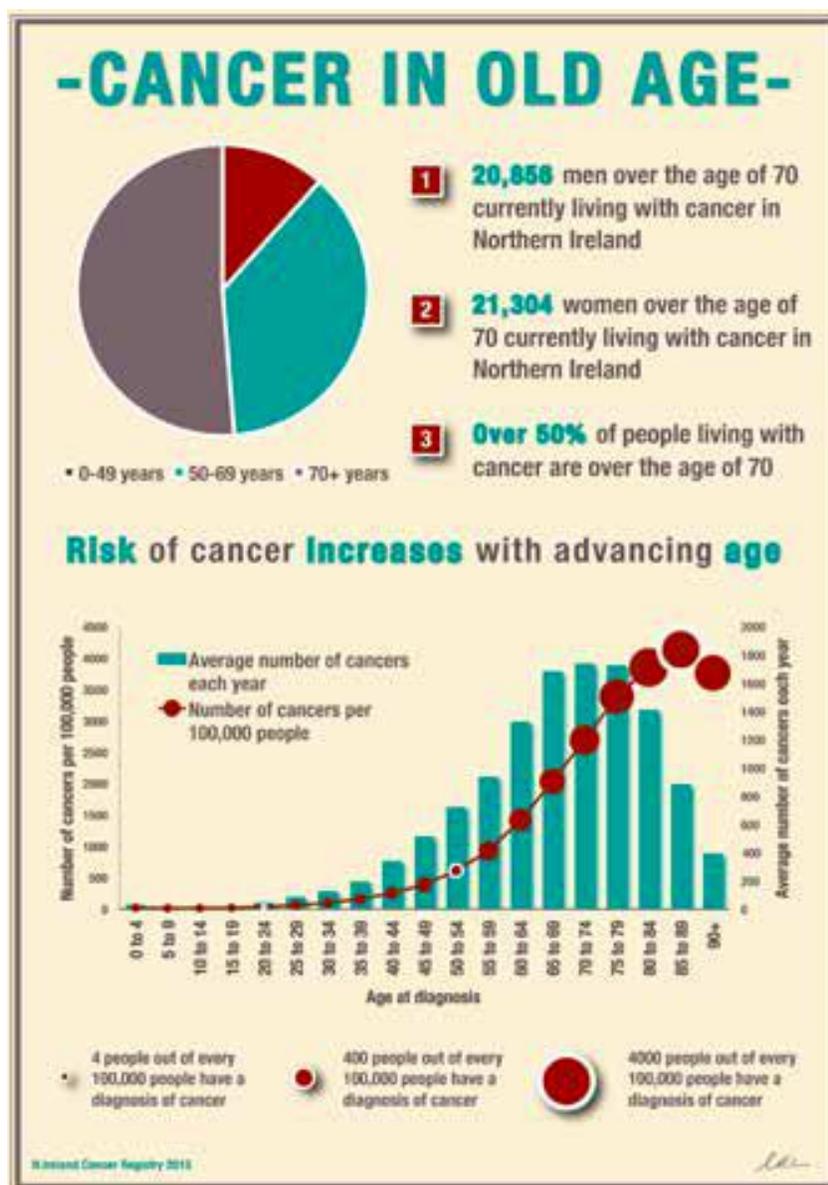

Figure 7. Charticle that is quickly and easily read (McCrorie and others 2016).

Another alternate route of communicating is found in a growing area of medicine:
telemedicine. Telemedicine offers a patient to visit with a doctor virtually through a screen. In a
survey in 2017, only 5.3% of respondents knew that their primary care provider was able to offer
online visits, and 31% were unsure. There is a willingness to use telemedicine though, as 51.9%
of respondents said that they were willing to use telemedicine for a doctor visit, and 22.7% were
neither willing nor unwilling (Welch and others 2017). This growing industry is willing to be
used by both doctors and patients and will prove a vital resource as an additional communication
route between a doctor and a patient.

Conclusion

Overall, the primary goal of doctor-patient communication is to benefit the patient's
overall health. When communication breakdowns happen, it can be detrimental to a patient's
health. Doctors' communication skills begin degrading in medical school, but they can improve
these skills through training, even short-term training. Improving upon their verbal, non-verbal,
and paraverbal communications will produce more effective communication both with their
patients and with the care team they work with. Having key tasks will help break key
components into more applicable and implementable steps. Utilizing patient-centered care and
relationship-centered care are good methods to use, although each communication style should
try to be tailored to each patient specifically.

Communication skills are both teachable and learnable with proper implementation. The
Association of American Medical Colleges (AAMC) and the World Health Organization (WHO)
both recognize the importance of communication skills. It is also important to recognize barriers
to communication and try to find ways to avoid them. Additionally, identifying doctors own

personal downfalls when it comes to communication, such as how much to self-disclose,

personal fears, or blocking behavior, will help doctors try to improve upon their communication

style with patients. Possibly looking for other routes of communication with patients, such as

infographics, might help provide some clarity. Avenues for future research can be a concise look

at exactly what training is most beneficial and then trying to implement that training early in a

doctor's career. Communication training early in a doctor's career will benefit their future

patient's wellness outcomes. To conclude, good doctor-patient communication skills are vital for

a patient to have better wellness outcomes and satisfaction.

References

Beach MC, Inui T. Relationship-centered care. A constructive reframing. *J Gen Intern Med* [Internet]. 2006 [2006 Jan]; 21 Suppl 1 (Suppl 1):S3-8. Available from: doi.10.1111/j.1525-1497.2006.00302.x

Beach MC, Roter D, Larson S, Levinson W, Ford DR, Frankel R. What do physicians tell patients about themselves? A qualitative analysis of physician self-disclosure. *J Gen Intern Med* [Internet]. 2004. 19(9): 911-916. Available from: doi:10.1111/j.1525-1497.2004.30604.x

Buckman R. Breaking bad news: why is it still so difficult? *Br Med J* [Internet]. 1984 [1984 May 26]; 288(6430):1597-9. Available from: doi:10.1136/bmj.288.6430.1597

Calderón JL, Beltrán RA. Pitfalls in health communication: healthcare policy, institution, structure, and process. *MedGenMed : Medscape general medicine* [Internet]. 2004 [2004 Jan 7]; vol. 6(1):9. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1140704/

Casali G, Cullen W, Lock G. The rise of human factors: optimizing performance of individuals and teams to improve patients' outcomes. *J. Thorac. Dis.* [Internet]. 2019 [cited 2019 Apr 11]; (Suppl 7): S998-S1008. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6535470/

Coiera E. Communication systems in healthcare. *The Clinical biochemist. Reviews* [Internet]. 2006 [2006 May]; vol. 27(2), 89-98. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1579411/

DiMatteo MR. The role of the physician in the emerging health care environment. *The Western journal of medicine* [Internet]. 1998 [1998 May]; vol. 168(5), 328-33. Available from: PMCID: PMC1304975

Gordon HS, Street RL. How Physicians, Patients, and Observers Compare on the Use of Qualitative and Quantitative Measures of Physician-Patient Communication. *Eval Health Prof* [Internet]. 2016 [2016 Dec]; 39(4): 496-511. Available from: doi:10.1177/0163278715625737

Griffith CH 3rd, Wilson JF, Langer S, Haist SA. House staff nonverbal communication skills and standardized patient satisfaction. *J Gen Intern Med* [Internet]. 2003 [2003 Mar]; vol. 18(3):170-4. Available from: doi:10.1046/j.1525-1497.2003.10506.x

Ha JF, Longnecker N. Doctor-patient communication: a review. *The Ochsner journal* [Internet]. 2010 [cited spring 2010]; 10:38-43. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3096184/

Hall JA, Roter DL, Blanch DC, Frankel RM. Nonverbal sensitivity in medical students: implications for clinical interactions. *J Gen Intern Med* [Internet]. 2009 [2009 Nov]; vol. 24(11), 1217-1222. Available from: doi:10.1007/s11606-009-1107-5

Hamann J, Neuner B, Kasper J, Vodermaier A, Loh A, Deinzer A, Heesen C, Kissling W, Busch R, Schmieder R, Spies C, Caspari C, Härter M. Participation preferences of patients with acute and chronic conditions. *Health Expect* [Internet]. 2007 [2007 Dec]; 10(4):358-63. Available from: doi.10.1111/j.1369-7625.2007.00458.x

Kirk P, Kirk I, Kristjanson LJ. What do patients receiving palliative care for cancer and their families want to be told? A Canadian and Australian qualitative study. *BMJ* [Internet]. 2004 [2004 Jun 5]; vol. 328(7428):1343. Available from: doi:10.1136/bmj.38103.423576.55

Löffler-Stastka H, Seitz T, Billeth S, Pastner B, Preusche I, Seidman C. Significance of gender in the attitude towards doctor-patient communication in medical students and physicians. *Wien Klin Wochenschr* [Internet]. 2016 [2016 Sep]; vol. 128(17-18):663-8. Available from: doi:10.1007/s00508-016-1054-1

Maguire P, Fairbairn S, Fletcher C. Consultation skills of young doctors: I—Benefits of feedback training in interviewing as students persist. *Br Med J.* [Internet]. 1986 [1986 Jun 14]; 293(6538):26. Available from: doi:10.1136/bmj.292.6535.1573

Maguire P, Pitceathly C. Key communication skills and how to acquire them. *BMJ* [Internet]. 2002 [2002 Sep 28]; vol. 325(7366), 697-700. Available from: https://doi.org/10.1136/bmj.325.7366.697

Mahdi Hazavehei SM, Karimi Moonaghi H, Moeini B, Moghimbeigi A, Emadzadeh A. Investigating the key factors in designing a communication skills program for medical students: A qualitative study. *Electron Physician* [Internet]. 2015 [2015 Nov 20]; 7(7):1441-8. Available from: doi:10.19082/1441

McCabe R, Healey PGT. Miscommunication in Doctor-Patient Communication. *Top Cogn Sci* [Internet]. 2018 [2018 Apr]; vol. 10(2):409-424. Available from: doi: 10.1111/tops.12337

McCrorie AD, Donnelly C, McGlade KJ. Infographics: Healthcare Communication for the Digital Age. *Ulster Med J* [Internet]. 2016 [2016 May]; vol. 85(2):71-5.

McNaughton EC, Curran C, Granskie J, et al. Patient attitudes toward and goals for MDD treatment: a survey study. *Patient preference and adherence* [Internet]. 2019 [2019 Jun 14]; vol. 13 959-967. Available from: doi:10.2147/PPA.S204198

Narayanan V, Bista B, Koshy C. 'BREAKS' Protocol for Breaking Bad News. *Indian J Palliat Care* [Internet]. 2010 [2010 May]; 16(2):61-5. Available from: doi:10.4103/0973-1075.68401

Quintana JM, González N, Bilbao A, Aizpuru F, Escobar A, Esteban C, San-Sebastián JA, de-la-Sierra E, Thompson A. Predictors of patient satisfaction with hospital health care. *BMC Health Serv Res* [Internet]. 2006 [2006 Aug 16]; vol. 6:102. Available from: doi:10.1186/1472-6963-6-102

Ranjan R, Kumari A, Chakrawarty A. How can Doctors Improve their Communication Skills? *Journal of Clinical and Diagnostic Research* [Internet]. 2015 [2015 Mar]; Vol-9(3): JEO1-JE04. Available from: doi:10.7860/JCDR/2015/12072.5712

Roter DL, Frankel RM, Hall JA, Sluyter D. The expression of emotion through nonverbal behavior in medical visits. Mechanisms and outcomes. *J Gen Intern Med* [Internet]. 2006 [2006 Jan]; 21 Suppl 1(Suppl 1):S28-34. Available from: doi:10.1111/j.1525-1497.2006.00306.x

Street RL Jr, Gordon H, Haidet P. Physician's communication and perceptions of patients: is it how they look, how they talk, or is it just the doctor? *Soc Sci Med* [Internet]. 2007 [2007 Apr 25]; vol. 65(3), 586-98. Available from: doi:10.1016/j.socscimed.2007.03.036

Swenson SL, Buell S, Zettler P, White M, Ruston DC, Lo B. Patient-centered communication: do patients really prefer it?. *J Gen Intern Med* [Internet]. 2004 [2004 Nov]; 19(11):1069-79. Available from: doi:10.1111/j.1525-1497.2004.30384.x

Thomas KB. General practice consultations: is there any point in being positive?. *Br Med J (Clin Res Ed)* [Internet]. 1987 [1987 May 9]; vol. 294(6581):1200-2. Available from: doi:10.1136/bmj.294.6581.1200

Welch BM, Harvey J, O'Connell NS, McElligott JT. Patient preferences for direct-to-consumer telemedicine services: a nationwide survey. *BMC Health Serv Res* [Internet]. 2017 [2017 Nov 28]; vol. 17(1):784. Available from: doi:10.1186/s12913-017-2744-8

Wessels H, de Graeff A, Wynia K, de Heus M, Kruitwagen CL, Woltjer GT, Teunissen SC, Voest EE. Gender-related needs and preferences in cancer care indicate the need for an individualized approach to cancer patients. *The oncologist* [Internet]. 2010 [2010 May 27]; vol. 15(6):648-55. Available from: doi:10.1634/theoncologist.2009-0337

Zgierska A, Rabago D, Miller MM. Impact of patient satisfaction ratings on physicians and clinical care. *Patient Prefer Adherence* [Internet]. 2014 [2014 Apr 3]; vol. 8 437-46. Available from: doi:10.2147/PPA.S59077