HEALTHCARE QUALITY AND NARRATIVE MEDICINE

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Abstract

Healthcare has been one of the most vital endeavors in human life during the entire history of humanity. In the past two millennia, all efforts and expertise are put into healthcare in order to maintain human beings in healthy condition. While the science and technology in medical field has advanced incredibly, some serious issues remain as problems in healthcare activities that need attention. Two issues that have been researched and discussed in the literature during the past century are quality and ethical problems in healthcare. Parallel to these issues is a new branch of research, called medical humanities, which attempts to emphasize the subjective experience of patients within the objective and scientific world of medicine, where literature plays a major role to influence and enrich medical practice. In this paper, we try to summarize basic types of human errors, causes of quality problems, and ethical issues in healthcare systems. We also try to present our views on healthcare quality and ethics and their relations to narrative medicine with an attempt to discourse the prospects of improving healthcare quality through narrative medicine.

Keywords: Healthcare quality, healthcare errors, medical ethics, medical humanities, narrative medicine

1. INTRODUCTION

"There is no valuable object in the public eye as the prosperity;

No prosperity exists in this world as having a breath of health."

Suleiman the Magnificent

"Before you examine the body of a patient,
Be patient to learn his story.
For once you learn his story,
You will also come to know His body..."

-The Maxims of Medicine, Suzy Kassem

While people value wealth and prosperity as the most valid asset than anything else, there could be no prosperity in the world like a healthy breath in a single instant of time. What good is prosperity for without having a good health? Health, and consequently healthcare, is one of the foremost important and critical issues in human life. While every rational person puts all efforts and care to his/her health during his/her entire life, majority of people are not aware of what serious problems could be faced while in healthcare system.

Diseases are inevitable events in our lives. When looking for cure for a disease, it is necessary to consult hospitals and physicians. But some patients who visit hospitals, aside from healing, they come out with other problems; even some die as a result of errors committed in hospitals, not from their own diseases. This situation is a problem in different degrees in almost all parts of the world. While there is an incredible advance in medicine and some miraculous treatments are

being made, at the same time unacceptable mistakes and unexpected negative results do occur in hospital systems that need to be seriously considered, particularly by healthcare professionals and the patients themselves. Majority of the public are unaware of important quality issues in healthcare systems. Physicians and healthcare personnel overlook or fail to recall important quality related matters during the treatment processes they carry out on the patient. This is possibly due to lack of education in healthcare curriculums and lack of healthcare quality culture in the society.

In this paper, we try to present some views on healthcare quality issues and discuss some new approaches and suggestions that are being theorized in the scientific world and the literature. It is understood that quality can be improved by several tools and procedures that are proven to be effective in industry. However, healthcare involves human subjects and thus needs humanistic approach for quality improvement, not only the tools and methods used in industry. Increasing quality awareness of the public and healthcare professionals, as well as including medical humanities subjects in healthcare curriculums, can help improve healthcare quality. Science and arts of medical treatment are vast areas of research with countless research publications. In addition to this essential medical knowledge, three distinct, but interrelated areas of research are emerging as **healthcare quality**, **healthcare ethics** and **narrative medicine.** It is anticipated that narrative medicine can improve the first two issues significantly. We will discuss several perceptions related to these three issues and present an overview of ideas and insights that possibly could improve healthcare quality through narrative medicine in different forms of literature.

2. ISSUES IN HEALTHCARE QUALITY

Quality control and quality management have become vital healthcare issues to ensure patient safety, reduce risks, increase hospital productivity, and satisfy patient expectations. The growing research literature in healthcare quality shows that the healthcare quality and safety could be improved by effective methods available. Benneyan and Kaminsky (1995) presented and overview of how to measure healthcare quality so that effective procedures can be used for improvement. Waring, et al. (2015) explored the contributions of both the mainstream and sociological approaches to healthcare quality and safety. Mainstream approach includes theoretical and empirical ideas found in the fields of ergonomics, human factors, and quality management. On the other hand, sociological literature on clinical quality and safety is presented as additional, complementary, and critical insights on the problems of quality and safety. Many healthcare managers and practitioners believe that action should be taken but are unsure of how to proceed within resource constraints. There are diverse approaches and strategies to improve quality and safety. Publications and reports describe different strategies, but few are well-designed research projects that include scientifically valid evidence. There is an even larger quantity of literature by consultants, academics and commentators, which recommend approaches for quality improvement. Some are based on sound experience, but little is based on scientific research. No single quality strategy can be recommended based on effectiveness, easy implementation, or costs. Many are case oriented and specific to a problem. Therefore, more research is needed for assessing effectiveness of various quality strategies that can be followed.

The quality of a product or service is measured by how well that product meets the standards, how it meets the customer's needs, or by error rates. Similarly, quality of health is measured by several criteria, such as satisfaction of a patient who visits a hospital, how well he is healed, or error rates during the treatment process. With the industrial revolution, particularly in the early 1900s, the science of quality control developed significantly, and related knowledge is well implemented in industry. Over the time, scientific knowledge has also been applied in the service sectors, including healthcare systems. Today, in modest industry, up to 2-3 manufacturing defects per thousand are acceptable. However, in delicate industries, such as electronics and space technologies, it is almost compulsory to manufacture products with only one defect per million components produced. Otherwise, systems would not be as reliable as today. A simple example would be today's aircrafts, which must fly with almost zero defects; otherwise, even with one defect per thousand, tens of aircrafts could crash daily due to thousands of airplanes flying each day. No one would get on the airplanes in this case. The same applies to other electronic devices that we use daily almost continuously. Berwick and Leape (1999) indicated that safety statistics in airline travel are far better than any other figures and that between 1990 and 1994 United States airline fatalities were only 0.27 per 1,000,000 aircraft departures, which is less than one third the rate in mid-century, despite vast increases in the complexity and volume of aviation systems. It is estimated that a modern passenger would have to fly continuously for 20,000 years in order to reach a 50% chance of injury in an airplane accident.

While in modest manufacturing industry the highest error rate is 2-3 per thousand and in advanced sensitive technologies it is much less than one per million, in healthcare industry the error rates are 3-4 percent, which is around 15 times the error rate in typical basic industry, and 30,000 times the rate in advanced technologies. These results have been proven by research on thousands of patients in the United States, and half of these errors are easily avoidable. This indicates that a patient who visits a hospital to recover or get well from a disease, is very likely to experience misdiagnosis, wrong treatment, wrong drug, wrong drug dose, high dose anesthesia, wrong surgery, infection, and even death. Unfortunately, there are many people who visit hospitals as patients, may leave without recovery; perhaps discharged from the hospital in a worse state than they entered initially. These error rates include only typical treatment errors, they do not include correct, but ineffective treatments, which are at much higher rates. If the correct, but ineffective and inconclusive treatment rates were included, the error rates would be much higher, which means that majority of patients visiting a hospital, most likely get out without recovery. Modern medicine unfortunately has severe risks of harms to patients. Berwick and Leape (1999), based on some previous studies, indicated that in two of the most regarded US hospitals, potentially serious medication errors were discovered in the care of 6.7 in every 100 patients. Also, a Harvard Medical Practice study reviewed 30,000 hospital records in New York state and found injuries from care

itself (adverse events) to occur in every 3.7% of hospital admissions, more than half of which were preventable and 13.6% of which lead to death. If this is extrapolated to the US healthcare in general, 120,000 Americans die each year as a result of preventable errors. If the most advanced country has this much high error rates in its healthcare system, the rates in undeveloped countries, which are even not measured, would be unimaginable. Researchers questioning these high error rates in healthcare have collected data, made investigations and wrote hundreds of scientific papers on this subject, which mobilized the public and the professional sentiment to redesign healthcare systems much safer in the future. There are many causes of errors in healthcare systems and many factors affecting them. We will try to list some of these causes and related factors in order to clarify the issue and to introduce some views for possible solutions.

*Variability i*s the first factor that causes poor quality in healthcare systems and high error rates. In other words, there are big differences in operations and treatments performed under the same conditions. This variability arises both from the patient and from the doctors and healthcare personnel providing the treatment. Variability from the patient is natural and very hard to control. Because there are great differences between the patients with the same disease. The response of two patients, with the same disease, to the same treatment may be different and this variability makes it difficult for physicians. Patients can be regarded as raw material for the hospital and this raw material is not homogeneous. In contrast, in the manufacturing industry the quality of the raw material used to manufacture a product can always be kept homogeneous and up to the same standard, and thus the final product can be manufactured without error. People entering a hospital, even if they have the same disease, differ significantly; each person may require a different intervention and treatment due to natural and biological variability in human subjects.

On the other hand, the variability arising from physicians, not from the patients, is a problem that needs to be questioned. Research on thousands of patients of the same type has shown that the treatment for the same disease, for example whether a specific disease is treated by medication or by surgery vary greatly from country to country, from hospital to hospital in the same country, or even from physician to physician in the same hospital. The same variability occurs in surgery rates as well. These rates also vary over time. In the 19th century, in many countries and hospitals, physicians recommended in more than 90% of cases that tonsils removal should be performed for the children. In one study, it was found that ninety tonsils out of a hundred was diagnosed as to be removed; but later after the year 2000, this rate was found to be less than 0.5%. For many surgeries, variability in the rates have been shown to differ 6 times from one country to another. Likewise, appendicitis, prostate, hernia, heart, etc. surgeries have shown significant variability between countries and between hospitals within the same country. The research results suggest that there have been huge differences between hospitals and regions in many common surgical rates.

Possible reasons physicians show variability in treating the same disease are mainly because they are influenced by the country of residence, the school they graduate, the professor they take courses with, the school of thought they are affiliated to, the health institution they work with, or their colleagues. In this regard, in the 1950s, some scientists and physicians interrogated these great differences in treating the same disease and inquired a question "can medicine be a science?" In basic sciences, such as engineering, physics, chemistry, and biology, knowledge is relatively constant, and does not vary from person to person, region to region, or country to country. If medicine is a scientific practice, why do treatments vary from physician to physician, from hospital to hospital, or from country to country? Wennberg (1982, 2010), as a result of his research on thousands of patients in different hospitals for large numbers of treatments during 1973-1984, has proven by numbers that some medical applications and methods followed are not based on scientific basis, but mostly based on subjective evaluations. Dr. John Wennberg has also shown that most treatments do not have objective standards, and often follow rules of practice or eye judgment. Numerous evidences have been shown that some health institutions have increased their operative rates to achieve their targeted earnings. As a result of these baseless practices in medicine and differences in treatments, some doctors who objected and stated that "medicine is not a science-based practice'' were dismissed from their profession. As indicated by Howell and Ayanian (2016), in the early 1900s, Dr. Ernest Codman was disgusted by his colleagues because he argued that each patient being treated should be followed for at least one year, and if the patient is not healed with the treatment applied, the reasons should be investigated in order not to make the same mistake in the future. Later he established a hospital named "The End Result Hospital" where he followed up each patient for at least a year as he proposed and did extensive research, which resulted in hundreds of findings on different diseases and useful research publications that later gained much admire and appreciation of other physicians in the medical world.

The second important factor causing errors and poor quality in the healthcare systems is the ***patient-doctor relationship*** and the ***information asymmetry*** that exists in this relationship. Information asymmetry means that in a relationship or agreement between two parties on a subject, one party has much more knowledge about that subject than the other party, and therefore, one party has the power to make bilateral decisions. If we compare it to a trade agreement in a bargaining relationship between the buyer and the seller; information asymmetry would be the situation where the seller has much more information about the product than the buyer, and therefore affects the decision made by the buyer. Effectively, the seller has more power and influences the decision to be in his favor. Similarly, in the hospital or clinic where the patient visits a physician for an examination, the physician is more knowledgeable about the disease and possible treatments, and thus an information asymmetry exists between the patient and the physician. When the patient and the physician try to decide about a possible treatment to follow, the physician has much power and practically makes the decision for the patient. Thus, the decision for someone, namely the patient, is made by someone else, the physician. No matter how ethical he acts, the decision-maker in a bilateral relationship could decide in his own interest and may cause errors and harm to the other party.

A third factor affecting rates of errors in healthcare systems is the fact that in ***bilateral activity*** between the patient and

the healthcare system, one party is physically affected as a result of the treatment decision and its consequences, while the other party is not. If both parties were physically affected by the error that may occur, the service provider would take as much care as the party receiving the service in order not to make mistakes. For example, an airline company and flight attendants are affected by flight errors as much as passengers do. In the event of a plane crash due to aircraft or flight errors, pilots and cabin crews lose their lives like passengers, and the airline company loses its aircraft, which is worth hundreds of millions of dollars. Therefore, maximum precautions and care are taken, and every effort is made in order to reduce the error rates to one millionth or practically zero. Unfortunately, the situation is not similar in the healthcare sector where the error rates are three or four in one hundred cases, sometimes even higher. Since any harm or death of a patient does not affect the healthcare provider in the same degree, the treatment provider does not give full attention to the treatment provided in order to reduce errors. Due to lack of full responsibility, enough time, effort, and resources are not spent by the healthcare provider during the treatment process. Specifically, in private hospitals or health centers, target earnings are set, and decisions are directed to receive maximum fees from the patient, while costs are minimized to achieve the earning targets that are set. Thus, priority or main goal is to make profit rather than to reduce healthcare errors that may easily occur during the treatment process. Because, if there is a mistake or if the patient does not heal, the hospital or the physician does not suffer any harm, nor they carry any accountability, particularly for the errors that seem simple and do not result in death.

The fourth factor, one of the most important factors affecting the high error rates in the health industry, is the **human factor**, which relates to the fact that majority of the procedures in healthcare systems are performed by human hands. As is known, the manufacturing industry was in the hands of craftsmen in the 1800s. It was called cottage industry; shoemaker for shoes, tailor for clothes, etc. Everything was done by hand and every process depended on the human factor. Therefore, quality was very poor, and the standards were not met. This was because anything done by human hand is subject to high variability and high variability means low quality and high error rates. Over time, as technology developed, manufacturing began to be made by machines, the accuracy was increased, and the quality was improved. As everything were switched to electronics and automation, error rates decreased dramatically, and quality reached a peak in industry. Unfortunately, quality in the health sector is still at a level, which is equivalent to what it is was during the cottage industry or the hand-made manufacturing industry in the 1800s. The human involvement in health systems is excessive and everything happens with the skills and experience of physicians, nurses and other healthcare personnel. Therefore, due to the nature of operations, which are necessarily carried out by humans, error rates are still high in healthcare systems.

Over the past six decades, healthcare quality issue has been researched in detail and several measures have been suggested. Data collection and statistical analysis of the data to quantify the error rates and to determine the causes are being studied by biostatisticians, physicians, and healthcare managers. Careful observation and data collection about operations, systematic analysis of results to investigate the causes have resulted in significant improvements in healthcare quality. For example, as indicated by Selanders (2019), Florence Nightingale, a British nurse, who saw hundreds of people getting sick and dying of infection in war hospitals in the Second World War, started simple applications as handwashing and disinfecting, and proved how much this simple activity prevented infections by making observations, collecting data, and making analysis to demonstrate the effects of changes on the outcome. Later, she became one of the pioneers of quality in health care.

One of the pioneering researchers in healthcare quality was Donabedian (1966), who covered the entire field of quality measurement as it was understood at the time. Donabedian proposed a conceptual model which provides a framework for examining health services and evaluating quality of health care. According to the model, information about quality of care can be drawn from the structure, the process, and the outcomes of a healthcare system. The structure is the resources of the healthcare system, the process is how they provide the healthcare and the outcome is the result, such as how well the patients are treated. Donabedian is considered as the father of healthcare quality and has studied all the major issues in his masterpiece paper "Evaluating the Quality of Medical Care", which was cited more than 6000 times. Berwick and Daniel (2016) indicated that during the last years of his life he suggested that healthcare quality cannot be improved only by enabling control mechanisms in the systems, it is the ethical dimension of individuals that is essential to a system's success." Toward the end of his life, Donabedian recognized, and worried about, the ascendancy of what he called an "industrial model" of quality improvement. Industrial model of quality is statistical analysis of data related to quality attributes and error rates, while in healthcare systems, quality problem is much more than this and it involves humanitarian acts, ethics, care, love, and empathy.

3. TYPES OF HUMAN ERRORS

Humans, by nature do commit mistakes and different types of errors. In healthcare operations majority of tasks are performed by human and thus are subject to serious errors, which result in healthcare problems. In order to avoid these problems, it is necessary to understand how human fail and how people commit errors. Why human make errors and what are basic types of errors? Rasmussen (1982), Berwick and Leape (1999), and Aronson (2009) have studied human errors in different perspectives, including industrial settings and healthcare systems. They made different classifications of errors and explained the conditions under which humans make errors. Zapf and Reason (1994) have explained human errors and error handlings from psychology perspective.

In general, human failure and the resulting errors can be classified as **inadvertent** or **deliberate errors**. Inadvertent failures, which are unintentional, result in errors that are either **action errors** or **thinking errors**. Action errors are not planned or intended and can be further divided into two types, namely **action-based** or **memory-based errors**. Action-

based errors are ***slips*** occurring due to unintentional actions, such as putting a switch up instead of down, while memory-based errors are ***lapses*** occurring due to momentary memory diversion, such as medical implement left in patient after surgery. Thinking errors are actions-as-planned, which may also be categorized as ***rule-based errors*** or ***knowledge-based errors.*** If human behavior is based on rules and procedures, errors may occur due to misapplication of a good rule or application of a bad rule. On the other hand, in knowledge-based errors, individual has no rules or routines available to handle an unusual situation, and actions are based on personal decisions; errors are made due to lack of experience or insufficient/incorrect information, such as misdiagnosing a disease and applying wrong procedures. Knowledge-based errors can be prevented by improving knowledge and teaching basic principles of therapeutics correctly with practical applications, which are up to date. Computerized decision-support systems can help healthcare providers make fewer errors. Errors that result from applying bad rules or failing to apply good rules can be partially prevented by improving the rules themselves. Training can help in preventing technical or action-based errors. Memory-based errors, which are the most difficult to prevent, can be minimized by installing systems that can detect such errors and permit corrective actions.

The second type of human failures is due to **deliberate actions**, which are non-compliance or violations. These actions can be ***routine***, ***situational***, or ***exceptional***. **Routine violations,** which may be unethical actions, become the norm due to lack of enforcement of rules. They can be avoided by strong enforcement of rules and possibly severe punishments for the harmful consequences. **Situational errors**, which are also partially unethical, may occur due to situation-specific factors such as time pressure, lack of tools, etc. Undesirable consequence of these errors can be avoided by reducing time pressure and providing enough tools and resources for the operations. Finally, in highly unusual circumstances **exceptional errors** are committed by taking calculated risks in breaking the rules, which may be bad or good in some situations. People should be educated for the significances of the decisions made in order to avoid seriously harmful consequences.

As described above, some types of errors may be avoided by control mechanisms and education. However, many times people commit errors deliberately, because it is to their benefit to take such an action and make such a decision. Later, we will discuss quality issues in healthcare systems, in which many problems are due to inhumane actions, and lack of kindness, empathy, understanding, compassion, and consideration. These behaviors can only be altered by producing sensitive state of mind that make healthcare provider feel deep empathy for the sick people. This is where the literature, in the form of stories, fictions, poems, articles, autobiographies, films etc. play significant role to alter minds of people and to put them in shoes of individuals in need of treatment. A complete cultural change may be needed in some cases through a variety of writings and media in the society.

4. HEALTHCARE QUALITY AND MEDICAL ETHICS

Parallel to the studies in healthcare quality mentioned above, ethical issues in healthcare activities have also been considered and studied in detail. Medical ethics, particularly those in the practice of medicine, directly affect the healthcare quality and can be improved through various studies and different forms of narratives. World Health Organization (WHO) defines ethics as morality principals, values and standards of conduct. Morality is the value dimension of human decision-making and behavior. Medical ethics deals with the issues in practice of medicine, while bioethics relates to the issues in development of biological sciences. Medical ethics or clinical ethics is a wide area of research and discussion. However, the issue that relates to healthcare quality is the physician-patient relationship, which is respect for persons, informed consent and confidentiality. In many situations, these principals could not be usually applied since there is frequently disagreement between the physicians, the patients and their families. Ethics is also important for the physicians in dealing with the society and in conducting medical research.

Two types of clinical ethics, which have been discussed in the literature, are ***evidence-based or empirical ethics*** and ***argument-based or normative ethics***. The methods of empirical ethics, as discussed by Sugarman & Sulmasy (2001), are well-understood and include accepted procedures for qualitative and quantitative research. Empirical data on ethical issues of interest are collected and analyzed in order to provide information to clinicians, to influence their clinical judgment, decision-making, and clinical activities. McCullough et al. (2007) have discussed argument-based normative ethics in a paper, which presents a systematic review of the literature particularly on concealed medication for the management of psychiatric disorders. They study a case that is good example of argument-based ethics. The case is related to a hospitalized patient with a major mental disorder whose behavior was disruptive on the healthcare unit. He was impaired in his ability to appreciate the need to take his medications and the consequences for him and the other patients in the unit of not taking his medications. Providing medication to this patient, who was repeatedly refusing it, by means of concealment in his food, was proposed by a member of the clinical team, as an alternative to forcibly holding the patient down and injecting medication. McCullough et al. (2007) concluded that the clinical ethics literature, and the bioethics and philosophy of medicine, lacks the disciplined approach afforded by conducting systematic reviews. Such reviews would improve the quality of subsequent clinical decision-making. There are annotated bibliographies on many topics and the very useful "Scope Notes" series in the Kennedy Institute of Ethics Journal, but these should not be categorized as systematic reviews. Systematic reviews play a major role in the basic and clinical sciences, and they should play a similar role for clinical ethics.

Nelson, et al. (2009) have described the relationship between ethics principles and the goals of improving quality, safety and value and they emphasize some important issues in this respect. They explain that ethical problems could be solved through applications of quality improvement framework, which in turn would increase the healthcare quality. They also mentioned that clinical ethics issues, which are complex and difficult to respond, are frequently encountered in today's

healthcare organizations. Ethics conflicts can undermine the patient's quality of care, the staff's morale, productivity and efficiency of the organization. It is stated that some economic cost categories, including operational, legal, marketing, and public relation costs, could be related to ethics conflicts. Quality of care can be diminished as a result of ethical issues. Particularly, when healthcare professionals do not provide full and truthful information regarding an invasive procedure to a terminally ill patient or when they fail to disclose an adverse event, neither the quality standard of patient-centered care nor the ethical standard of respecting self-determination is met. Effectiveness of clinical quality improvement increases significantly with a system-based view of care, rather than a case-based view of care. A similar approach should be taken in addressing ethics issues. Ethics committee members should cooperate with quality improvement professionals to combine the system-based view of care with the recognized methods and tools of quality improvement to proactively address ethics issues. Moulton and King (2010) indicate that there are clinical evidences that many patients undergo surgery that they would decline if fully informed. Failure to communicate the relevant risks, benefits, and alternatives of a procedure violates medical ethics and wastes medical resources. They suggest that integrating shared decision-making, as a method of communication between provider and patient into medical decisions, can satisfy physicians' ethical obligations and reduce unwanted procedures.

Jones (1999) indicated that narratives contribute to medical ethics through the content of stories and through the analysis of their form, as how they are told and why it matters. The study of fictional and factual stories can be an important aid to understanding in medical ethics. The techniques of literary criticism can be applied to the analysis of ethical texts and practices and can inform the understanding of different perspectives in an ethical dilemma. To understand and accept a patient's moral choices, a practitioner must acknowledge that the illness narrative has many potential interpretations but that the patient is the ultimate author of his or her own text. She also indicated that ''during the past two decades, stories have been important to medical ethics in at least three major ways: firstly, as case examples for the teaching of principle based professional ethics, which has been the dominant form of medical ethics in the Western world; secondly, as moral guides to living a good life, not just in the practice of medicine but in all aspects of one's life; and thirdly, as narratives of witness that, with their experiential truth and passion, compel re-examination of accepted medical practices and ethical precepts.''

While good ethics can be established through narrative medicine, narrative medicine itself has issues of ethical consideration Tekiner (2017) presented this matter in a whole chapter titled ''ethical considerations related to narrative medicine.'' He indicated that narrative medicine has significant role in health care area, where plights and stories of patients are considered in the commencement of actions. Methods of close literature reading, and reflective writing facilitate the opportunity to examine and explore central medical situations, develop effective communication between patient and healthcare professionals, and install substantial discourse with the community regarding health care. Several developed countries have already included narrative medicine as an integral part of health care. Tekiner (2017) also indicated that one of the drawbacks in narrative medicine is the use of patient data with intentions other than treatment, which may result in maleficence. The practice of narrative medicine requires balancing all the aspects of health care against any possible harm.

5. HEALTHCARE QUALITY AND NARRATIVE MEDICINE

As it is summarized in the previous sections, healthcare quality deals with minimization or elimination of errors occurring during the healthcare and treatment process. Since majority of activities and operations are carried out by human, it is necessary to control the whole human action in the system. By data collection and statistical analysis one can find error rates and how they occur. However, healthcare quality is involved with much more than such analysis. The problem is rooted in human issue and is related to humanities. Healthcare providers should be well trained for effective practice of medicine through narrative competence, that is, the ability to acknowledge, absorb, interpret, and act on the stories and plights of others. Medicine practiced with narrative competence, called *narrative medicine*, is proposed as a model for humane and active medical practice. Abdel Malak (2017) and several others have indicated that courses related to medical humanities must be included in medical schools and medical students gain significant benefits and feel much more empathy towards the patients with such education early in their career.

Oyebode (2010) indicated that medical humanities in the form of literature helps to emphasize the subjective experience of patients within the objective and scientific world of medicine. More specifically, autobiographical accounts, fiction, drama, letters, poetry, stories, and journal papers can serve as literary forms of value to doctors in order to appreciate the heart of the sentiments that there is a clear desire to be treated with respect and compassion, to be understood, and for the objectivity of modern, technologically advanced medicine to be balanced by a more humane approach that takes account of the subjective experience of the patient. Hurwitz and Charon (2013) indicated that while medicine has been saturated with narrative knowledge, it is only over the past 40 years that there has been an increase in writing, research, and teaching about narrative medicine and narrative-based practices, which are bringing the power of story-based telling, appreciation, and analysis into the routines of scientific clinical work. During 1950s, the notable medical narratives included fictions of physician-writers such as Anton Chekhov and William Carlos Williams, the case writings of Alexander Luria, and the work of Edith and Michael Balint with London general practitioners, while during the 1970s and 1980s, linguists and sociologists, including Elliot Mishler and his colleagues, pioneered efforts to study clinical conversations, discovering how disparate and in conflict were the "Voice of Medicine" and the "Voice of the Lifeworld". Hurwitz and Charon (2013) also stated that humanities scholars and clinicians began to write and read medical discourse for developing narratological ideas in medicine. Texts written by patients, caregivers, and creative writers help to generate frameworks for understanding the biographical, mental, and physical disruption brought about by illness. Today, patients, clinicians, and the whole society are representing events and concerns of health and illness in diverse media, such as

film, photography, fine arts, performance arts, and others, which create a healthcare quality culture like total quality management concept in industry. Charon (2017) indicates that ''by now, as we have become more rigorous in our own scholarship in the disciplines of philosophy, literary studies, critical theory, qualitative social sciences, creative writing, and visual arts, the immensity of our work comes into view. The fact that we have had such a hard time agreeing on what even to call this thing we do-medical humanities, health humanities, narrative medicine, bio humanities-testifies to its magnitude.'' As he also points out, training in the humanities lets one see the suffering, which in turn improves the knowledge of the cost of this life, and the need for improved healthcare quality. Charon (2017) also states that, ''for those who are prepared, the sight of the laden, heavy, dragging reality of illness and dying comes with its antonymous double: a view of that floating bridge between here and there, that fragile passage between the knowable and the unknowable, that ground each one of us stands on in each lived moment (now, here, as you read my words; now, here, as I write them) with no guardrails, no signposts, no map, no territory; a clear-eyed discernment of this thing, this life, its worth.''

Lee and Foo (2006) state that the word narrative is interchangeably used with the word story and give one of the definitions of the term narrative as a representation of past events in any medium such as, oral, written, filmed or drawn. They also state that there are at least three lenses through which we can view narratives in the world of healthcare. Firstly, there are organizational stories, which are written to create and strengthen social capital and to contribute to the success of the organization's knowledge management initiative. Secondly, there are illness narratives, that are stories told by people about their subjective experience of illness. The illness narratives, whose therapeutic potential has been recognized, are a source of knowledge about the disruptive nature of illness. Thirdly, there are stories that are told by physicians practicing medicine with narrative competence. Lee and Fao (2006) proposed four requirements for the narratives to be effective, namely effective listening skills, the availability of time and place for storytelling, and the codification of narratives.

Charon (2001), the best advocate of narrative medicine, have discussed the benefits of literary criticism and narrative theory to help doctors and ethicists examine their ethical practices in medicine in detail and have indicated that: literary accounts of illness can teach physicians lessons about the lives of sick people; fiction can inform physicians of the power and implications of what they do; and understanding narrative structure can help physicians grasp patient's stories more fully among other things. He states that ''the effective practice of medicine requires narrative competence, that is, the ability to acknowledge, absorb, interpret, and act on the stories and plights of others. Medicine practiced with narrative competence, called **narrative medicine**, is proposed as a model for humane and effective medical practice. Adopting methods such as close reading of literature and reflective writing allows narrative medicine to examine and illuminate four of medicine's central narrative situations: physician and patient, physician and self, physician and colleagues, and physicians and society. With narrative competence, physicians can reach and join their patients in illness, recognize their own personal journeys through medicine, acknowledge kinship with and duties toward other health care professionals, and inaugurate consequential discourse with the public about health care. By bridging the divides that separate physicians from patients, themselves, colleagues, and society, narrative medicine offers fresh opportunities for respectful, empathic, and nourishing medical care. The issue of narrative medicine is very much involved, and the literature is widely available on the subject, its relationship with healthcare quality can be summarized with a quote from Donabedian (1966). In an interview just before his death, he famously avowed, "The secret of quality is love. You have to love your patient, you have to love your profession, you have to love your God." Thus, quality is not only mere applications of rules and procedures, it is empathy, kindness, understanding, and uniquely humane attribute that upholds dignity in healthcare process. These attributes can only be achieved and established by stories of the sick people, fictions, autobiographies, and other forms of narratives. Healthcare quality can be considered as a function of ethics and ethics is a function of medical humanities and related accumulation of knowledge. Thus, real healthcare quality can only be achieved through improvement of ethics and understanding the patients by narrative medicine.

7. CONCLUSIONS

Healthcare quality is an extremely important issue in today's healthcare systems. While the trend is to improve the healthcare quality by analysis of errors and applications of various statistical procedures for avoiding or minimizing these errors, it has now become evident that healthcare quality has another feature that is related to ethical issues and humanitarian aspects, which needs to be advocated to the healthcare professionals and providers through various forms of narratives. Doctors, nurses, and other healthcare providers should be able to put themselves in the shoes of the sick people, who completely depend on them and trust them in various ways during the treatment process. Narrative medicine has been playing significant role in changing the attitudes of the healthcare providers and it will play more significant roles in the future. Healthcare professionals, through readings of various narratives, develop more empathy toward the patient and thus become more careful, more caring and more attentive in treating the patients, which is directly reflected to healthcare quality in a positive way.

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