Emerging Issues in Medical and Engineering Ethics:  
The Case of Reverse Paternalism in Lebanon

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Abstract—There are different occupations and professions in  
almost every society, and despite all the ethical frameworks  
that govern professions by professional ethics, it is widely  
noticed that there are still challenges facing each profession.  
One of those ethical challenges is related to paternalism.  
Paternalism is the act of interfering with a person’s autonomy  
by making decisions for them claiming that it is “for their own  
good”. In a developing country like Lebanon, an ethical  
dilemma is commonly noticed in the field of medicine but not  
commonly discussed in the literature. This dilemma will be  
termed and defined for the first time as reverse paternalism.  
Reverse paternalism refers to the act of sacrificing one’s  
autonomy and self-determination and giving another person or  
group the right for making decisions on their behalf. People  
are considered moral agents and some are giving up their  
autonomy and rights for making decisions to medical  
practitioners because “they know better”. The main focus of  
this paper is therefore on reverse paternalism that will be  
investigated as an ethical dilemma being faced in Lebanon.  
What exactly is reverse paternalism? Are there regulations  
that restrict such kind of paternalism? How do medical  
practitioners act in such situations? And to what extent is there  
auditing over what happens in hospitals, private clinics,  
medical centers and institutions? Our aim is to shed the light  
on this ethical dilemma and highlight how serious and wide  
spread it has become, by providing statistical data we have  
collected. We will also provide recommendations based on  
cases showing the adverse ramifications of reverse paternalism  
on society.

Keywords—medical ethics; engineering ethics; medicine;  
paternalism; reverse paternalism.

I. INTRODUCTION

We live in a world that is divided into groups of distinct  
fields related to disciplines of different schools. People get  
education and major in different fields to become  
professionals and enter the world of employment. Doctors,  
scientists, professors, lawyers, teachers, engineers, etc., find  
themselves in situations where important decisions have to  
be made, and because they are the ones “who know better”,  
their decisions have to be right, especially when other  
people depend on them. Governmental morals are often  
incomplete without personal morals. Three types of  
moralities or ethics have arisen, namely, common morality,  
personal morality, and professional ethics [1]. Each country  
classifies various occupations as being a profession or not.  
Engineering for example is considered a profession in our  
society and therefore needs a set of standards to be adopted  
by professionals. Each profession should include a basic  
methodology for deciding what is morally right and what is  
morally wrong in one’s professional conduct to qualify  
whether an action is right or wrong. This normative ethics  
and principles leads to the codes of ethics that demonstrate  
the accountabilities and duties of each profession and when  
these codes are followed, the field flourishes and brings  
changes to the field and the world as well. But what happens  
if these codes are not taken into consideration and  
professionals act outside the ethical frameworks that govern  
their behavior? And who is affected by such unethical acts?

Despite of all these normative ethics and standards, it is  
widely noticed that there are still challenges facing each  
profession. As Biomedical Engineers, one of the  
professional obligations that governs our personal practice is  
to regard responsibility toward the rights and the health of  
patients and since the doctor-patient relationship is an  
example of a relationship between individuals which is  
rulled by ethical behavior, we found that it is important to  
shed light on one of the ethical challenges that faces this
relationship which is the long-practiced paternalism. Paternalism is the act of interfering with a person’s autonomy by making decisions for them claiming that it is “for their own good” [2].

Paternalism is problematic because the definition of a patient’s best interests used by a paternalistic approach is too narrow, because such best interests should not be determined by the medical facts alone but the patient’s views and judgments should be taken into consideration also. It has become evident that doctors often act in a paternalistic way about their patients claiming to do so because they “know better”. In a developing country like Lebanon, various medical practices lack a successful shared decision-making because of the physicians’ attitudes and irresponsibility on one hand and the patients’ lack of education, fear, laziness and the inability to make a serious decision on the other hand. But what is really interesting that paternalism nowadays is encouraged by the patients themselves; in other words, paternalism is being reversed and moral agents, such as patients, customers etc. are giving up their autonomy either intentionally or unintentionally. This ethical dilemma is commonly noticed in the field of medicine, and will be termed and defined for the first time as reverse paternalism. This paper will provide a small background about ethics, and discuss paternalism and the possible causes of reverse paternalism. Patients were surveyed with a questionnaire designed to identify the extent of reverse paternalism tendencies. Hence, a definition and some possible solutions will be proposed. Medical reverse paternalism is one of the ethical cases that specifically apply to biomedical engineering, but all types of engineering in general as well. This is the first time that this ethical issue is being identified, quantified, discussed, and assigned of being a real problem and factor in various fields such as medical diagnosis and treatment in Lebanon. Our aim is not only to gather data of the extent of reverse paternalism in Lebanon, but also try to understand how to raise the awareness of patients for their treatment choice rights. This is implemented by distributing a questionnaire with very direct questions related to reverse paternalism.

In Section II, we will define ethics and their contributions to religion and culture, to give an idea about the influence of religious and ethical aspects on decision-making processes of people. In Section III, ethics will be explained and defined according to their types in the fields of bioethics, engineering ethics and medical ethics, as well as biomedical engineering ethics. Section IV will be about the scope of this paper, which is reverse paternalism. In this section, the link between paternalism and reverse paternalism will be explained. It will also be defined for the first time given a title and explanation of the importance of engineers contributing to this dilemma. It will also highlight the relation between biomedical engineers and ethical dilemmas that are found in medical practices, and the importance of taking responsibility for what happens with patients in medical practices. Section V is an explanation of the concept of informed consent that is obligatory in medical practices for patients to know what exactly will be done during certain treatments. Section VI provides a clear explanation of how a decision-making process between patients and doctors should be done, in addition to a comparison to how it is done in Lebanon, in our observation. Section VII includes the survey that was done by distributing a questionnaire and collecting data, in addition to a presentation of the results of our investigation. Finally, Section VIII is a conclusion of what we have hypothesized and the outcome of whether reverse paternalism is an ethical challenge in Lebanon or not.

II. WHERE IS ETHICS FOUND?

Ethics is a group of principles, values, rules and regulations, beliefs, morals and rules of conduct [1]. This group organizes goals and actions for the achievement of the most important values one can have. This means that any flaw in behavior might mislead one from the path of being ethical. Ethics can be described as being a system of moral principles that differentiate between what is right and what is wrong. In other words, ethics is a norm of conduct that recommends concepts of acceptable and unacceptable behavior.

All cultures have systems of health beliefs to explain what might be the cause of a certain illness, the way it can be treated and who will be involved in it. Culture specific values have high influence on patient roles and expectations. It often specifies how much information is desired, how death/dying will be managed, sorrow patterns, gender family roles, and processes for decision-making [3]. Therefore, each culture brings its own views and values to the healthcare system which alters healthcare beliefs, health practices, and of course the nature of the doctor-patient relationship. Cultures differ mainly between developed and under-developed countries. Developed countries adopt a shared decision-making process between the patient and the doctor, where the patient receives all the information, support and education that is needed and asked for by the patient. Whereas developing countries rather lack that kind of relationship and consultations between patients and their doctors.

Ethics can be seen as the base of religions, though it is explained and may be even seen from different perspectives in various religions. Since religion has very high impact on how most of the people live, behave and how they do not behave, then ethics must be applied to tell whether this act is right or wrong. However, each religion has another opinion of how to clarify ethical principles. Lebanon is known to have the most religiously diverse society in the Middle East, hence it is important to address the issue of Reverse Paternalism from a religious point of view. By approaching this case, Christianity and Islam will be considered rather generally. We find that Western Christian Civilization, and specifically American medicine, is founded upon Biblical
ethics and the tradition of the Greco-Roman Heritage. These are based on several principles such as the presence of moral codes and moral justifications, the doctor-patient relationship, in addition to moral integrity etc. Life in all its forms has a very high status in Islam, and human life is one of the most sacred creatures of God. It must therefore be respected, appreciated and protected. Islamic law is called the Shari’a and is not the same as Islamic ethics, since in Islam everything has to be checked twice, first if it is against legal standards and second against moral standards [4].

There is an absolute harmony between Islamic law and morality, but they have still different objectives, meaning that they might differ in their prescriptions.

III. THE MAIN TYPES OF ETHICS

Our study mainly concerns ethics in biomedical engineering, which is the intersection between bioethics, medical ethics, and engineering ethics. In order to understand the relationship and contributions of these fields with one another a brief overview of each is provided.

A. Bioethics, Medical Ethics, and Engineering Ethics

Bioethics is an activity; it is a shared, reflective examination of ethical issues in health care, health science, and health policy [5]. It defines the basic ethical values for the conduct of biomedical and behavioral research involving human and non-human subjects.

Medical ethics is a system of morals and principles being applied to situations that are specific to the medical world and the practice of medicine. Ethical principles are mainly: autonomy, beneficence, justice and non-maleficence [6].

Engineering ethics stands for the set of ethical standards and principles ruling the behavior of engineers in their title role as professionals. In other words, an engineer should be devoted to the protection of public health, safety, and well-being [1].

B. Biomedical Engineering Ethics

Biomedical engineering is the application of engineering principles and techniques to medicine and biology. Each profession is ought to include a basic methodology for deciding what is morally right and what is morally wrong in one’s professional conduct. Ethics is considered to be the central concept to biomedical engineers, since its principles guide them to recognize ethical problems and attempt to solve them. This is why there is a code of ethics that emphasize the major principles of a biomedical engineer being followed and respected. But what is a principle?

A principle is used as a basis for ethical reasoning by guiding a specific action or behavior. Autonomy, Beneficence, Non-maleficence, and justice are the main principles biomedical engineering ethics is based on [6].

IV. REVERSING THE TIDE OF MEDICAL PATERNALISM

Every time the state of a person is interfered with another person’s autonomy, it is a case of paternalism, which of course is claimed to be of benefit for the person who “knows less” than the one acting paternalistic. This act is often justified and thereby wrapped in a more attractive appearance as providing protection and hence the best for the other person. A significant kind of autonomy is the one that exists as a counterweight to the medical profession’s long-practiced paternalism. Today, the principle of patient autonomy and self-determination has emerged as the dominant ethos in health care, threatening in many instances to totally eclipse the principle of medical beneficence [7].

The typical doctor-patient relationship, where the physician acts paternalistically towards their patient and takes decisions for them and very often not even explains why and how the decision was taken. In their opinion, there is no need to explain, because the patient either would not understand it, or does not need to know about it. There are many reasons that may have led to this situation that we find in these days, especially in Lebanon.

What makes it such a serious and dangerous case is that patients do not even notice how they are being used and are losing their autonomy because a doctor just decided that this pregnant woman cannot give birth naturally and needs to undergo a caesarean operation instead. This woman of course believes it because in the end she thinks that her doctor is just doing what is right and best for her and her baby and this is all she cares about. But what this woman does not know is that very often it is not her that benefits from this operation, but her doctor. It is a common knowledge in Lebanon that there are many doctors that can be considered more as businessmen rather than physicians that once took the Hippocratic oath. What matters is how much they benefit instead of acting according to the principles that seek for beneficence, non-maleficence, and justice for the patients.

Because people behave according to their culture and religion, a doctor should at least be aware of what those tell the patient to do. Is mere knowledge enough to justify the limitations that patients are subjected to on their liberty or violations of their autonomy? And is it even morally defensible to act paternalistically in the sake of preventing harm and providing welfare and benefit? At first thought one might think of course it is, but the real problem is that we find that very often it is not her that benefits from this operation, but her doctor. It is a common knowledge in Lebanon that there are many doctors that can be considered more as businessmen rather than physicians that once took the Hippocratic oath. What matters is how much they benefit instead of acting according to the principles that seek for beneficence, non-maleficence, and justice for the patients.

People can be paternalistic. Institutes can be paternalistic. Motivations can be paternalistic. Acts can be paternalistic. Reasons can be reasons of paternalism. Paternalism is found everywhere. But does this completely incapacitate our ability to make our decisions and choices? Does giving up our right to choose become a habit? The real problem exists when people, in particular patients,
proactively give up their autonomy by themselves and leave all the decisions to the physician, again, because “they know better”. Many of those may be too old to take certain decisions, and others might just not understand what will happen thereby, diminishing their rights to choose. Whenever a patient asks his/her doctor to prescribe whatever medicine or medical intervention that the doctor sees fit, we have a case of Reverse Paternalism. Whenever a patient refuses to choose a treatment procedure among other procedures and trusts the doctor to choose for him, we have a case of Reverse Paternalism. Whenever a patient is advised to perform a medical image in a specific laboratory assigned by a doctor and does not question the doctor’s recommendation, we have a case of Reverse Paternalism. Therefore, these acts feed the tide of paternalism to give rise to an emerging ethical dilemma termed as Reverse Paternalism, which is the act of sacrificing one’s autonomy and self-determination and giving another person or group the right for making decisions for them. The patient allows the physician to do what is best for them, and this way taking life-based decisions for them. What this patient might not have thought about is that this doctor might misdiagnose a case and make mistakes. Who is to blame in such cases? How honest is this doctor and to what extent might he/she be saying the truth?

There are numerous reasons that push patients into giving up their autonomy and let their physician choose for them. Though most of these reasons neither justify nor solve the dilemma of reverse paternalism. Yes, there are many cases one could think of where reverse paternalism is the right thing to do, but there will never be certainty to that the physician’s interest is only their patient and their health. So, to what extent can doctors be trusted?

The least this patient can ask for is information. There is a whole protocol to be followed if a patient must undergo a surgery. The physician is ought to take enough time in order to explain why the surgery has to be done, who will be doing it, where is it going to happen, what the consequences and side-effects might be, if there are other choices, and what might happen if this surgery was not performed. Images and explanations with simple terminology should be used in order to make sure that the patient has understood everything and can now decide and choose. This patient must be a moral agent and the physician must try as much as possible not to act paternalistically and abide by the rules of professional medicine. Paternalism induces power imbalance between health professionals and patients. The professional should be the expert in the area of diagnostic information, treatment options and possibilities. But the patient is also an equally valid expert, with specialist knowledge in her or his own personal concerns, history, family roots, philosophy and way of life. The expertise that the professional brings to the consultation is not merely technical [8]. This kind of paternalism is most commonly present in the field of medicine, and directly related to biomedical engineering in particular, and engineering in general.

As Biomedical engineers, it is our obligation to conduct responsibility towards the rights and safety of patients that are part of this issue. For this reason, we find it important to shed light on this challenge of reverse paternalism, and inform people about the importance of remaining their moral agency. It is important to find out how frequent a successful shared decision-making process is in a developing country like Lebanon, in order to investigate the reasons behind this ethical dilemma. This dilemma interferes with decisions taken by engineers who work in the medical field. Biomedical engineers are engaged in a range of interactions, which includes interactions with patients as well as doctors. We noticed in our society that there is a clinical dependence of patients in their decision-making process on the opinions of their doctors. Some patients tend to trust their doctors to an extent that made the doctor-patient relationship crossing the boundary of professional ethics.

Biomedical engineers are responsible agents in their respective profession, which means that they must act in the interest of the patients and use their knowledge and skills to benefit them and inform and alert them when it is needed. Because biomedical engineers are engaged to deal with medical devices and equipment in hospitals and health care facilities, then they have responsibilities towards the life and safety of patients. One example that reveals the issue is when a doctor prescribes MRI or CT scan at a specified medical laboratory for a patient for no clinical reason, only for the benefit of the doctor or to benefit the medical laboratory and the patient accepts and trusts their doctor and allows them to make decisions on his/her behalf. Here, the biomedical engineer can either accept that kind of behavior and even make use of the patient’s dependence and ignorance, or encourage legislations regarding this issue and educate the patients and alert them about the hazards of
radiations and the technical implications of any medical procedure/treatment and strive to protect the patients and their rights and educate them about the importance of getting involved about decisions regarding their treatment.

As engineers, we are expected to satisfy the standard of care by holding paramount the safety and health of the public. As biomedical engineers, we must act in patient-centered manners and apply engineering principles in managing medical systems and devices in the patient setting. Thereby, we are obliged to regard responsibility towards the health and safety of patients. Figure 1 illustrates the interaction between a clinical/biomedical engineer and other parties. This not only verifies that a biomedical engineer is involved in all decision-making processes with all kinds of departments, in any healthcare facility, but it also highlights the fact that patients are prioritized. Our role as biomedical engineers is patient-centered and this is another reason for us to approach this ethical dilemma with high interest. The current patient-doctor relationship that is presented in our society has triggered our sense of responsibility; where we identified an emerging ethical dilemma concerning this relationship where we think that some patients themselves are encouraging the act of medical paternalism, which is long practiced by doctors in the medical field.

V. INFORMED CONSENTS IN MEDICINE AND ENGINEERING

Let us take a closer look at this principle and explain its importance. As mentioned previously, moral agents have the autonomy to make decisions on their own, and differentiate between right and wrong. A patient has therefore the capacity to act intentionally with a full understanding, and without influence of a free and voluntary act. It is the basis for the practice of an “Informed Consent”. It is very important to shed light on what an informed consent is because it has become evident that many people do not even know of its existence. An informed consent is a process for getting a patient’s permission before being subjected to a certain healthcare intervention. In other words, when a patient is diagnosed to undergo a surgery or receive therapy, the physician is obliged to get the patient’s permission. This is done by providing them with a document that contains all the information the patient has to know before taking the decision of permission or not. It comprises a clear appreciation and understanding of all the relevant facts, implications, and consequences of the specific therapy or surgery. Certainly, no information should be kept from the patient so that they are able to form a rational decision and to avoid severe ethical issues arising from the lack of sufficient data. If a patient is not able to take any decision due to mental disability, sleep deprivation, Alzheimer’s disease, or being in a coma, or immaturity, then another individual is certified to give consent on their behalf such as parents, siblings, or legal guardians of a child.

Sometimes the consent is divided into an information component, and a consent component. The information component refers to disclosure of information and comprehension of what is disclosed giving the patient the chance to consider its content in his/her decision-making. The consent component refers to both that his decision is a voluntary decision and that permission is given to proceed. Note that informed is collected according to guidelines from the fields of medical ethics and research ethics.

In Lebanon, many patients that have undergone surgeries or treatments, sound surprised when hearing the word “informed consent”, which implies that they most probably have never seen one and thereby permission was taken only orally if not paternalistically. The informed consent is not only a must for patients, but also a protection for physicians. It is evidence that the patient agrees to what will happen to them, and what might happen if they did not undergo this surgery or therapy. Not only has the patient the right for an informed consent, but also the physicians and doctors. Many practitioners believe however that patients may thus be better served if efforts are directed instead to finding ways of minimizing hard paternalism without too great a compromise on patient’s freedom [7]. This argument is yet to be validated from an ethical perspective.

VI. DECISION-MAKING PROCESS

Decision-making process is the process of selecting a belief or a course of action among various alternative choices. Taking the doctor-patient relationship as an example to illustrate this process, seven main steps will be explained in order to highlight the importance of the informed consent that is part of this process [10]:

1) Identify decision to be made
2) Gather relevant information
3) Identify alternatives
4) Weigh evidence
5) Choose among alternatives
6) Take action
7) Review decision and consequences

Doctors have the medical knowledge that makes them superior to patients in decision-making. They do know best in the sense that they have more scientific and medical information concerning injuries and diseases and their elimination and elevation more that the patients have. Therefore, patients are advised to surrender to this epistemic authority. This issue raises various ethical and social questions that should be taken into account. There are many patients that do want to know and gain knowledge about their diagnosis or treatment, but the main challenge is about the patients that show no interest to shared decision making. Patients are now quite aware of how the process of decision-making is done. Table I illustrates a comparison between
how decision-making should occur, and how it is done here in Lebanon. When describing what happens in Lebanon, only a general idea of what is happening is given, showing why it is so important to find solutions and recommendations for encouraging patients to follow a process of shared-decision making. However, reasons are numerous, and most of them might be of cultural sources. There is a strong relationship of dominance and affection between decision-making and culture. Just like ethics in general has an impact on religion or cultures, these cultures have an impact on how patients might take their decisions. Patient roles and expectations are often influenced by culture values, sometimes it is influenced by how much information and about illness and treatment is desired, how death and dying will be managed, sorrow patterns, gender and family roles, and hence processes for decision making. Each culture brings its own views and values to the health care system, which alters health care beliefs, health practices and doctor-patient relationship. A general guideline for such relationship should be based on an approach of mutual respect and appreciation of roles. Just as professionals must not abuse their position by manipulating or coercing patients against their will, so patients must not coerce professionals to go against their fundamental ethical convictions and professional values [8].

VII. SURVEY

The purpose of this survey is to examine the presence of the suggested phenomenon in Lebanon and to assess to what extent it is present in the field of medicine. If the results indicate that this phenomenon is spread in our society, then we must alert people about it and we must try to suggest some regulations to restrict such kind of paternalism.

The following hypothesis is formulated to achieve the objectives of the present study: A new kind of paternalism is emerging in the field of medicine in Lebanon, termed as Reverse Paternalism.

The study was conducted on a representative sample of 85 patients in Beirut region. The patients who were selected in the sample were males and females with diversity in age and education. (Table II represents a sample of the questionnaire). The questionnaire consists of 20 items and each item has five alternative responses: strongly disagree, disagree, neutral, agree, and strongly agree. These items are related to the following concepts:

1. Patient’s autonomy
2. Decision making process

The questionnaire has a variety of questions that refer to a paradigm of reverse paternalism or the absence of reverse paternalism, as well as a neutral point of view. Figures 2-a, b, c, and d give an illustration of the age, gender, marital status, employment status, and educational level. A total of 85 patients have answered 20 questions. Each question was analyzed in order to categorize it. Questions 1, 4, 6, 7, 8, 10, 12, and 15 are direct questions referring to reverse paternalism. The questions can be separated as two types, 10 positive questions and 10 inversed questions meaning the opposite of the positive ones. As Figure 3 shows, 85% ask their doctors about information about suggested treatments or procedures. 70% disagree with their doctors not involving
I never ask my Dr. for information about a suggested treatment/procedure

Agree 13%
Neutral 2%
Disagree 85%

Figure 3. Illustration of how many patients ask for information.

I want my Dr. to choose on my behalf

Agree 28%
Disagree 53%
Neutral 19%

Figure 6. Patients wanting their doctor to choose and decide on their behalf.

I do not want my Dr. to involve me in decisions about my treatment

Agree 15%
Neutral 15%
Disagree 70%

Figure 4. Patients’ disagreement on not being involved in decision-making processes.

It is ethically permissible for patients to allow Drs. to act paternalistically

Agree 38%
Disagree 42%
Neutral 20%

Figure 7. The percentage of patients who find it ethically permissible for doctors to act paternalistically.

I have a successful shared-decision making relationship with my Dr.

Agree 69%
Neutral 24%
Disagree 7%

Figure 5. Patients say that they have a successful shared-decision making process with their doctors.

I refuse to let my Dr. choose on my behalf

Agree 41%
Disagree 45%
Neutral 14%

Figure 8. Patients refuse to let their doctors choose on their behalf.
them in decisions about their treatments (Figure 4). Only 53% do not allow their doctors to choose on their behalf, 19% have a neutral opinion, which means that 28% allow their doctors to take decisions for them (Figure 5). Figure 6 illustrates how 38% agree that it is ethically permissible for doctors to act paternalistically with their patients. When asked if they refuse to let their doctors to take decisions on their behalf, 44% disagreed (Figure 7).

As most of the results indicate the existence of weak reverse paternalism, we took a closer look at the age and educational status of those who showed tendency towards reverse paternalism. Some of the patients that are in the age range of 40-60 years have a lower educational level, due to the complications of war Lebanon has faced, also showing tendency towards reversing paternalism. We chose a patient to ask about his last visit to a Doctor. This patient was a married, employed male of age between 40-60 years of age with an elementary educational level. He was asked about how much he trusts his Doctor and how much he believes in what he prescribes as treatments. He agreed on telling us what his problem was and what was prescribed, and when we asked him if he knows what each drug is for he said no and responded: “He is a very good Doctor and I am sure he knows what is best for me and what to prescribe for me to get better.” Again, we took a closer look at the questionnaire this patient had filled, and noticed that they do not quite match the way he really acted.

VIII. CONCLUSION

Who is to blame? When patients give up their autonomy in the thought of having someone more educated and professional taking decisions for them? Who is to blame if that person did not do what is most beneficial for the patient? Reverse paternalism appear to be a serious issue in developing countries. However, it has not been defined yet because people have not acknowledged it till now, even though it has become a common knowledge in the medical practice. This is due to the absence of the regulations specific to reverse paternalism that can restrict the physicians’ unethical behavior towards patients. Physicians who are supposed to be committed to the Oath they made are making use of some patients’ dependence and lack of education for their own interests, with the absence of ethical concepts or regulations. In Lebanon, medical practitioners lack the sense of responsibility due to the lack of auditing and supervision over what happens in hospitals/clinics.

A good test for their responsibility is the question “Do physicians commit to ethical or legal standards when there is no supervision?” and it seems that most doctors fail this test!

Our intentions were not only to get numbers and percentages of people who really are reversing paternalism or not, but as mentioned previously in the introduction, the questions were direct on purpose. Some of the questions were answered as how patients should act, but do not really act like in real life. This does not mean that the results are far from reality, because patients were very honest, but it rose awareness and may even prevent patients from not only reversing paternalism, but also reduce the long-term practiced paternalism. Now, surveyed patients may think twice about how to undergo the process of shared-decision making. As engineers, it is our responsibility to alert people, inform them about problems and challenges they might face and advise in order to help them avoid harm. Since numbers are still not very high, reverse paternalism might be just at its beginning to increase, and our aim is to reduce and prevent this ethical issue from happening.

Recommendations must be provided to control this ethical dilemma. Ethical guidance that governs the behavior of doctors and patients in cases of Reverse Paternalism should be developed. Highlighting the importance of consent before any medical intervention is another recommendation. Moreover, we recommend organizing at least one meeting before any operation where the patient consults and gets all the information needed. In order to raise that issue and let people know that they do not have to give up their right of autonomy, medical practitioners should teach people to ask!

REFERENCES

<table>
<thead>
<tr>
<th>Process steps</th>
<th>Description of each step</th>
<th>Application of each step in Lebanon</th>
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</thead>
<tbody>
<tr>
<td>Identify decision to be made</td>
<td>Go through an internal process of trying to define clearly the nature of the decision you must make.</td>
<td>Patients realize that there is a decision to be made but instead of going through an internal process, they immediately ask their physicians for advices and what to do.</td>
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<tr>
<td>Gather relevant information</td>
<td>Most decisions require collecting pertinent information. The real trick in this step is to know what information is needed, the best sources of this information, and how to go about getting it. Some information must be sought from within you through a process of self-assessment; other information must be sought from outside yourself—from books, people, and a variety of other sources. This step, therefore, involves both internal and external “work”.</td>
<td>Many people do now know where to look for information or whom to ask. Others try to get information from people with similar experiences instead of researching properly. The process of self-assessment is sometimes not clear to certain patients.</td>
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<tr>
<td>Identify alternatives</td>
<td>Through the process of collecting information you will probably identify several possible paths of action, or alternatives. You may also use your imagination and information to construct new alternatives. In this step of the decision-making process, you will list all possible and desirable alternatives.</td>
<td>Many patients ask their physicians for alternatives, but do not know where to look for information other than their healthcare practitioners, which is the same problem found in step 2.</td>
</tr>
<tr>
<td>Weigh evidence</td>
<td>You draw on your information and emotions to imagine what it would be like if you carried out each of the alternatives to the end. You must evaluate whether the need identified in Step 1 would be helped or solved through the use of each alternative. In going through this difficult internal process, you begin to favor certain alternatives, which appear to have higher potential for reaching your goal. Eventually you are able to place the alternatives in priority order, based upon your own value system.</td>
<td>The challenge in this step is that many patients do not even reach this step. But helping them reach this point would make it easier for them to be able to imagine themselves in certain situations.</td>
</tr>
<tr>
<td>Choose among alternatives</td>
<td>Once you have weighed all the evidence, you are ready to select the alternative, which seems to be best suited to you. You may even choose a combination of alternatives.</td>
<td>What is done here, is that most patients only take into account the alternatives their physicians have told them, so when left with a number of alternatives they are lost when confronting decisions on their own. (Only if physicians haven’t been paternalistic when implying what alternative to choose).</td>
</tr>
<tr>
<td>Take action</td>
<td>You now take some positive action, which begins to implement the alternative you chose in Step 5.</td>
<td>This is where patients return to reverse paternalism and let their health care practitioners choose what alternative to choose and implement.</td>
</tr>
<tr>
<td>Review decisions and consequences</td>
<td>In the last step you experience the results of your decision and evaluate whether or not it has “solved” the need you identified in Step 1. If it has, you may stay with this decision for some period of time. If the decision has not resolved the identified need, you may repeat certain steps of the process in order to make a new decision. You may, for example, gather more detailed or somewhat different information or discover additional alternatives on which to base your decision.</td>
<td>This depends on what type of decision was made. If the decision has not resolved the identified need, if a surgery has not been successful, patients often blame their physicians. These physicians however, have been told to decide for them, which is why shared-decision making is of highest importance.</td>
</tr>
</tbody>
</table>
Table II. Patient Questionnaire

Answer questions as they relate to you.
Check the box(es) that are most applicable to you.

8) About You

<table>
<thead>
<tr>
<th>a) 1. Your Age</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Below 15</td>
<td></td>
</tr>
<tr>
<td>☐ 15-20</td>
<td></td>
</tr>
<tr>
<td>☐ 20-40</td>
<td></td>
</tr>
<tr>
<td>☐ 40-60</td>
<td></td>
</tr>
<tr>
<td>☐ Above 60</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b) 2. Your Gender</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Female</td>
<td></td>
</tr>
<tr>
<td>☐ Male</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c) 3. Your Marital Status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Single</td>
<td></td>
</tr>
<tr>
<td>☐ Married</td>
<td></td>
</tr>
<tr>
<td>☐ Previously Married</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d) 4. Your Employment status</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Student</td>
<td></td>
</tr>
<tr>
<td>☐ Employed</td>
<td></td>
</tr>
<tr>
<td>☐ Unemployed</td>
<td></td>
</tr>
<tr>
<td>☐ Retired</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e) 5. Your Educational level</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Elementary</td>
<td></td>
</tr>
<tr>
<td>☐ Intermediary</td>
<td></td>
</tr>
<tr>
<td>☐ High School</td>
<td></td>
</tr>
<tr>
<td>☐ College</td>
<td></td>
</tr>
</tbody>
</table>
9) **Doctor-patient Relationship**

Please complete the following questionnaire by circling the appropriate answer.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I never ask my doctor for information about a suggested treatment/procedure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I seek multiple opinions before selecting a surgery/treatment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I’m confident that my doctor provides me the best treatment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I don’t want my doctor to involve me in decisions about my treatment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I have a successful shared-decision making relationship with my doctor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I want my doctor to choose on my behalf</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Doctors know best for patient and they have to decide for them</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>It is ethically permissible for patients to allow doctors to act paternalistically</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>In critical cases I prefer my doctor to choose on my behalf</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I trust my doctor in everything he says because he is well-known to be the best in his/her field</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I always ask my doctor for information about a suggested treatment/procedure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>It is not necessary to seek multiple opinions before selecting a surgery/treatment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I don’t trust my doctor’s ability to provide the best treatment for me</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I want my doctor to involve me in decisions about my treatment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>My doctor-patient relationship lack a successful shared-decision making process</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I refuse to let my doctor choose on my behalf</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Even though doctors know better, they don’t have the right to choose for patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>It is not ethically permissible for patients to allow doctors to act paternalistically</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I prefer to take all my medical decisions by myself</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>I don’t trust my doctor completely just because he is known to be the best in his/her field</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>