

ETHICAL CONSEQUENCES OF CURRENT TRANSFORMATION PROCESSES OF MEDICINE FROM PROFESSIONAL ETHICS POINT OF VIEW

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Abstract: In the paper, we emphasize the idea of radical changes in contemporary medicine that have occurred as a result of the unprecedented development of scientific and technological progress. There is a growing need to analyse the current state and problems in the field of medicine, to consider its new goals and perspectives with an emphasis on the ethical dimension. From a wide range of questions and problems of contemporary medicine, we examine the ethical aspects of the patient's autonomy, commercialization of medicine and personalized medicine. We point out that applied occupational ethics in this field also provides a strategy for cultivating professional responsibility for doctors (healthcare professionals).

Keywords: contemporary medicine, patient autonomy, commercialization, personalized medicine, ethical problems, professional ethics.

1. Introduction

Development in medicine today go hand in hand with modern technologies and shift the possibilities of treating human health and saving human life into new, yet unimaginable spheres. However, development and intense progress in medical science bring new ethical issues concerning medicine and health, which need to be addressed. Medical, health or doctor ethics arose out of the need to respond adequately to these revolutionary changes and new ethical issues and dilemmas¹. Many of today's figures of contemporary medicine and the

¹ Under doctor ethics, we understand professional ethics, which deals with moral problems (dilemmas) in medical practice, it is a critical reflection of the doctor's conduct in terms of morality and ethics. We do not consider the doctor's ethics to be the same as medical ethics, we perceive it as an applied ethics, which, despite their common interconnections, has a different subject, epistemology and methodology, and, among other things, represents the application of ethical requirements to the field of medicine, which is also evoked by further specialization of professions in this field. As a term, it is superior to medical ethics. Health ethics can be seen, according to us, as an applied ethics that deals with the ethical aspects of healthcare as a system (institutional-organizational level),

aforementioned applied (occupational) ethics rightly point to the need to pay attention to the basic issues of the existence and functioning of contemporary medicine, such as the need to analyse the current state and problems of medicine, to consider its goals and new perspectives, about its new priorities, with an emphasis on its ethical dimension².

The aim of our paper is to build on these ambitions and try to outline and approach some of the current ethical issues that patient's autonomy, commercialization of medicine, and personalized medicine bring.

2. Patient's autonomy in the context of a doctor-patient relationship

Today, the principle of autonomy is most likely to be subject to change. It can be said that autonomy is at the same time the main moral right of patients in their right mind. It is based on the recognition of the value of every person, which is also reflected in the possibility to decide on your life and health. Autonomy of a man - patient means to co-decide about one's self and one's affairs.

The principle of recognizing the patient's autonomy thus concretises the new role that the sick persons begin to "play" in current medicine. Man is considered to be an autonomous personality when acting freely, with a sense of rational understanding of one's own good. Traditional medical paternalism determined the doctor to take decisions and to act independently, thus denying the right of the patient to be an autonomous person, the "master" of his own body, the author of his own "autobiography"³.

and its professional aspect (level) cannot be omitted, with emphasis on the rules, principles, norms and requirements regulating the relationships of healthcare professionals to colleagues, patients, the public.

² For example, the project "Objectives of Medicine, Searching for New Priorities" (Callahan, 1997) contains, inter alia, also the considerations of the further development of medicine, with the emphasis on achieving values such as: 1. medicine should be fundamental and self-organizing its own professional style (i.e. it should be part of a community-led dialogue, draw its research priorities, deepen its humane approach to life); 2. The reticence and consciousness of medicine (i.e. based on the experience that although medicine does not make human life immortal, it can help people survive their lives as well as possible); 3. affordability of medicine (i.e. not to lose sense for a certain affordability of health care, more expensive diagnostic and treatment procedures must not lead to a reduction in basic and affordable care for the patient); 4. Medicine should be socially sensitive, fair and equal. See: (Callahan, 1999; Kořenek, 2004, p. 17-18).

³ The ethical principle of autonomy is an important part of the ethics of principles along with others, such as the principle of harmlessness, benevolence and justice. The creators of this ethical concept are considered to be the US representatives of the biomedical ethics T.L. Beauchamp and J. Childress (Principles of Biomedical Ethics), according to which all four principles express universal morality and are therefore generally valid and universally applicable, which applies to different cultural spheres and contexts. In spite of several critical objections (it is not possible for everyone to understand the meaning of all the principles in the same way, there is not always accord in what is in the best interest of the patient, the willingness of the doctors to meet the wishes of the patients also differs, etc.), they still represent a popular and used theory especially in medical (doctor) practice. To advocate principlism as a method of ethical reasoning, we would like to say that its ambition is not to give unambiguous guidance and solutions, but it rather leads to a dialogue in which the principles serve as a certain "border" in conducting a dialogue. The main contribution of these ethical principles lies in allowing them to work with individual or group differences in their definition, which in today's pluralistic time allows agreement

From the above it follows that understanding this principle does not mean only the general recognition of the right of the patient to co-decide on the proposed and realized diagnostic and therapeutic procedures, but also that the principle of autonomy "goes even further" (Šimek, 2015, p. 119). Autonomy is a word of Greek origin (*auto* means alone and *nomos* means the rule), i.e. an autonomous individual sets the rules for his own conduct, and as he develops as part of a community and lives in a particular society, these "rules" are influenced by them. This means that the principle of autonomy is, in fact, two-way. According to J. Šimek, the patient "as each person sets the rules for their actions and for their lives", "establishes them in dialogue with society" and "the doctor will recognize these autonomous rules in dialogue with him and respect them in his work" (Šimek, 2015, p. 120). We agree with the view that what stands behind the decision making of both, the doctor and the patient, is the order of values (Šimek, 2015, p. 120). In this regard, the respect for the patient's autonomy means not imposing on him the doctor's value judgments, because medicine today is a service and the basis of a service is an offer, i.e. no one is obligated to accept the offer (Šimek, 2015, p. 120).

At present, in medical practice, we are quite often confronted with the ever-wider application of the principle of autonomy, resulting in a "too liberal ethics" which interprets every agreement and cooperation between the doctor and the patient, on which they agree (free informed consent), as autonomous.

Paternalism on one hand, "liberal autonomy" on the other. How should a doctor (healthcare professional) decide in different situations in which he finds himself in the performance of his work? Current demands on more and more involved co-decision of the patient on all important matters relating to his health or life are met with serious reservations. For the patient is a layman, and therefore he cannot understand all that is related to his treatment, and he cannot make a good decision. Despite these arguments, the patient cannot be circumvented in a moral decision (Šimek, 2015, pp. 105-106)⁴.

At present, we notice the ambition to address this issue with the help of teamwork as well as the increased respectability of experts in ethics (ethics experts). We share the opinion that considering all options is practically the only way to solve decision-making problems (for example) at the end of life, which belongs to the professional ethics specialists. Ethical counselling, counselling in ethics can be a good help for doctors in this matter.

(consensus) among advocates of different value systems and allows them to understand the essence of their conflicts. For more details see: Šimek, 2015, p. 127-128.

⁴ This view is supported by several experts, pointing out that the possibilities of current medicine are very wide, which greatly affect the co-decision making of the patient and the doctor. For example, surgical procedures can radically change body composition and treatment measures can even change the quality of life of the patient. At that time, the patient addresses the question of the meaning of his/her further life, so in addition to biological arguments, also the value judgements enter into the decision-making. Therefore, the patient cannot be excluded from the decision-making process.

3. Ethical aspects of commercialization of medicine

Commercialization, the economy of medicine, new forms of goods and services in the field of medicine and healthcare, more profit-oriented medicine, are factors that now significantly affect the provision of health care. However, the emphasis on financial criteria may result in the limitation of health care for those who cannot pay for it and its provision to those who "can afford it". Thus, the well-being of the patient is perceived in the context of economic or financial criteria (unlike the traditional, Hippocratic concept of medical ethics, which emphasized the duty of a doctor to submit himself and his interests to the well-being of the patient). Doctors (healthcare professionals) are likely to encounter more and more frequently (if it is not already the reality) questions and problems relating to the different understanding of "what constitutes the basis of the old profession". Some will advocate and defend the conviction of the importance of their actions in favour of the well-being of the patient as they do not consider a profit orientation to be morally correct. The others, on the contrary, will be (are) convinced that promoting and "doing" the medicine "as a business" does not pose any moral problem because the personal interest of a doctor (healthcare professional) may not be in conflict with the well-being of a patient.

Whether or not, the economic aspects enter into the decision-making of the doctors (healthcare professionals), which is a serious problem from the point of view of doctor ethics (medical and health ethics). If the doctor in his work and decision-making is affected by various rules and instructions of an economic nature, it is often problematic to reconcile them with the interests of the sick person. These are situations and cases where the patient's interest may not be in accordance with the economic interests of the healthcare facility, or the economic interests of the healthcare facility in which the doctor is working may not be in accordance with the economic interests of the entire healthcare system (Šimek, 2015, pp. 203-205).

We hold the view, despite the wide range of problem situations and medical (healthcare) phenomena, that humanism and the moral relationship of the doctor, based on the principle of harmlessness, should be an important support in the activity of doctors or healthcare professionals. Although the principle of harmlessness is one of the oldest ethical principles (it calls for the exclusion of any intentional harm and wrong-doing), it still remains actual today. It does not only apply to the field of medicine, but it can be considered as an initial requirement relating to the moral conduct of people in general. "The very formulation of this principle as a command suggests that it is primarily a" bounding "principle, but its content is not exhausted by it. In the form of commands, the "strongest" moral norms are regaled that regulate the moral conduct of people as follows – If the action can cause "harm" to another person, such action must be avoided!" (Kovařová, 2013, p. 77).

Doctor ethics, following this request, emphasizes its attention to the issue of medical humanism, duty, honour, the doctors' conscience in the process of their work, and the moral

standards reflected in the system of relations "doctor – patient", "doctor – doctor", "doctor – society", "doctor – relatives of the patient", "doctor – instrument – patient", etc.

As an example of the above opinion, we are referring to M. Munzarova's view that the doctors should avoid seeing the patient more as a "client or insurer" and less as a suffering man, with whom the doctor is compassionate and helps him according to his abilities and strength (Munzarová, 2005, p. 56). We can only agree that "points and money are definitely good", but in relation to medical morality only "good on the outside" and not on the inside and inherent "... She addresses the following words to the doctors (as being a doctor herself): "Let's try we see this difference at all times, not only because of our patients who are entrusting us and trusting us, but also for ourselves. For we all want to be men virtuous in the spirit of Aristotle: "A virtuous man, judges rightly about everything - and the truth is revealed to him in all things" (Munzarová, 2005, p. 57).

4. Ethical issues of personalized medicine

With the development of human knowledge and technical possibilities, the so-called personalized medicine⁵, that focuses on examining the individual's health and individual needs, gets a lot of attention. It turns out that every person has a different "portfolio" of innate alleles⁶ and that is why each person is different. In addition to this, the epigenetic effect occurs during the pregnancy and several months after the birth the genetic basis is partly changing. As a result, every person requires different, individual approach of the doctor.

The doctor constantly moves between two basic views of the patient – on one hand it is needed to have sufficient expert knowledge about the recommended procedures and methods of his treatment and use them, and on the other, each patient is a distinct individual, with different physical and mental characteristics. Attempt to individual approach to each patient then "discovers between the necessity to follow the recommended practices, principles and methods, and the fact that the same illness manifests itself a little differently with each person, each person tolerates it differently, each person has (at least in part) an individual prognosis and each person responds to treatment differently" (Editorial, 2009, pp. 213-214). Although, according to the opponents of the modern concept of "personalized medicine", there is nothing

⁵ The concept of personalized medicine was first published in the title of K.K. Jain (Jain, 1998). In this book and in the other two, the author devoted himself mainly to defining the concept, history and inclusion of personalized medicine in the context of biomedical development. Namely the publications: Textbook of Personalized Medicine. Springer, 2009 and The Handbook of Biomarkers. Springer – Human press, 2010. This topic was also elaborated by Czech authors: O. Topolčan and J. Kinkorová in a short but transparent article (Topolčan, Kinkorová, 2012, p. 121-122).

⁶ The allele or allelomorpha is the inherent basis of the sign, one of several alternative forms of the gene. The gene is a DNA nucleic acid segment encoding a particular sign of an individual. The gene is usually composed of two alleles, each originating from one parent. The alleles determine how the sign will manifest in the body.

new, because good medicine has always been "personalized", even in the past, it was based mostly on empirical knowledge, the quality of a good doctor and on his detailed knowledge of the patient, which allowed him to apply really personalized medicine, at present, in connection with progress in medicine "it is just an idealized memory that has no hope for restitution" (Editorial, 2009, p. 213). The already mentioned progress in the medical field allows the doctor's individual approach to the patient to be based on a new, genetically founded basis⁷. Many solutions are hidden in visible and invisible differences between people, such as age, weight, lifestyle, in our genes, and genetic information contained in them. Diagnostics and possible measures, or treatment, based on the observation of these individual differences among people, has become the basis of the already mentioned personalized medicine⁸. This type of medicine uses knowledge of genetic information not only to "predict" the origin and development of the disease, but also to the personalized approach to the therapy of the individual. The main aspects of personalized medicine can be summarized as follows: "proper diagnostic and correct treatment for the right patient at the right time".

In the field of personalized medicine, we meet (as we have already indicated) several ethical (and legal) questions. For example, diagnosis and treatment that takes advantage of genetic testing and counselling poses a long-standing problem from an ethical perspective. Genetic testing does not only affect the patient himself but can also affect a wide range of relationships with other people, relatives, close friends, superiors, or colleagues. Expanding information on

⁷ In order to better understand what led to the emergence of personalized medicine in the 20th century, especially with a focus on significant discoveries from the end of the century, we will mention some of them: already in 1908, the Danish scientist W. Johannsen introduced the concept of genes, genotype, phenotype. In 1931, A.E. Garrod described that individual differences in treatment responses had a genetic basis. In 1953, J.D. Watson and F. Crick described the structure of DNA. In 1957, S. Berson and R. Yalow described the radioimmunoassay (RAI), which became not only a method for the quantification of hormones and enzymes, but started a new stage of deepening knowledge of inflammatory processes, autoimmunity, etc. In the same year, W. Kalow and H. Motulsky formulated the basics of pharmacogenetics (a department that studies inheritance-dependent variability of organ responses to clinically-known drugs). In 1986, T. Roderick used the term genomics (a genetics discipline that deals with the study of genomes of organisms). The years 1990-2000 are often referred to as years of genomics and are characterized by the development of molecular technologies, mainly nanotechnology, the development of proteomics (scientific discipline that deals with the study of proteins and their properties) and, in 1997, A. Marshall's conceived pharmacogenomics (science discipline using knowledge genotype technologies to develop new drugs and deeper understanding of older drugs). The end of this decade was characterised by the complete sequencing of the human genome in 2000-2003. This development focused on the scientific basis of personalized medicine. It is important to note that without a social order, it would not be possible to develop it in this form. The impulse for a social order was a warning finding in the 1990s that morbidity and mortality rates on the incompatibility and complications of treatment outweighed the morbidity and mortality caused by civilization diseases. This finding had impact not only on medicine, but also on wider socio-economic, social, manufacturing aspects (pharmaceutical industry) and, last but not least, ethical aspects. Subsequently, the genomics, proteomics and others most commonly known under the generic name -omics methods for predicting the effects of undesirable treatment effects, as well as for how the enzymatic system metabolizes the individual drugs, have grown massively. For more details see (Topolčan, Kinkorová, 2012, pp. 121-122).

⁸ The father of personalized medicine is considered to be L. Hood, whose discoveries have constantly changed the direction of biology and revolutionized the understanding of genetics, life and human health. He created the technological base of genomics and proteomics, and in 2000 he founded the Institute of Systemic Biology (ISB), integrating knowledge of biology and computational technology with targeted therapy. Efforts to implement a systemic approach to the treatment of illness led to the establishment of a new medical department in 2003 – Personalized Medicine (so-called 4P Medicine – Predictive, Preventive, Personalized, Participative).

disease risks can cause discrimination against humans. Information obtained through a genetic test may, on one hand, mean life-saving, but on the other hand it can be a burden on both, the patient and the doctor. In this context, it is very important to select an appropriate model of behaviour and action in the process of genetic counselling⁹. In other words, the main role of medical-genetic counselling is to establish a close contact not only between the doctor - the geneticist and the patient, but also between the doctor - the geneticist and the patient's family. We believe that an ethical professional (expert) as a consultant to a doctor – the geneticist can help here, because he is competent to deal with several ethical dilemmas arising from genetic testing and counselling. Ethical professionals are professionals with special (ethical) education, experience, and training that help them identify, analyse and address the moral problems that arise in the patient care process. In principle, the doctors should use ethical experts and seek their help in making ethical decisions.

In addition, addressing the above-mentioned ethical problems requires the creation of universal standards that would apply to the various levels of relationships arising in the professional activity of doctor – the geneticist. It is not just about the specific technologies of realization of genetic counselling, but rather about important ethical bases, about the conceptual basics of the ethics of the doctor – the geneticist, which can be presented in the form of a code of ethics. We are of the opinion that, despite the existence of several Pan European¹⁰ and national¹¹ legislative standards, the global character and the unusually wide scope of the use of international legal acts does not mean not to produce local forms of normative regulation of a given field, which may be codes of ethics. Ethical codes and rules in the field of genetic research and genetic counselling have a common axiological basis, which is expressed in the form of the four ethical principles of contemporary biomedical ethics: taking into account the autonomy of personality, helpfulness, harmlessness and rightness. These principles determine the nature of values and intentions that are "embedded" in normative documents regulating relationships in the field of healthcare.

⁹ Genetic counselling represents the communicating process of a doctor - geneticist with the patient, or his relatives. The aim is to provide accurate and comprehensible information about the diagnosis of the genetic condition, its prognosis and treatment options, the heritability of the disability, the potential risks of disability for family members, and preventive measures. Doctor - geneticist offers professional help at solving the situations associated with these facts. Families should themselves come to solve dilemma situations that appear (will appear) in a genetically hazardous family, but the doctor leaves them free to make their own choices.

¹⁰ International law regulates these relationships by means of standards and values in several UNESCO documents, which, although they have a reference character ("soft" law documents) General Declaration on Human Genome and Human Rights (1997), Declaration on Human Genetic Data (2003). The legally binding documents (at the initiative of the European Council) includes the Convention on Human Rights and Biomedicine (1997) and its several additional protocols, for example Additional Protocol on Genetic Testing for Medical Purposes (2008).

¹¹ The development and implementation of personalized medicine with emphasis on genetic testing and counselling in Slovakia are guided by several professional organizations associated in the Slovak Medical Society, for example The Slovak Society of Medical Genetics, the Slovak Society of Clinical Pharmacology and others. In 2012, the Slovak Society of Medical Genetics issued methodological guidelines setting out standards (principles) of genetic testing based on international documents governing the provision of medical care in the field of medical genetics. See (SSLG).

From the point of view of the ethical aspects of personalized medicine (genetic testing), the most pressing issues can be to ensure the protection of the privacy of an individual through the effective protection of his or her sensitive personal data. The first question is who and under what conditions should access these data. The patient should be particularly protected because he becomes very vulnerable in regard to the important data availability.

In addition to the above-mentioned protection of personal data, the serious issue is also the technical security of concerned persons' interests (e.g. insurance, food industry, etc.), personal identity analyses and impacts on the same group of people (especially family), the relationship between the individual and the state with regard to gained information about its own population, but also the question of informed consent, which is still somewhat controversial to a certain extent¹².

5. Conclusion

The 21st century medicine faces and will certainly face new challenges, professional, organizational and economic, but we still consider the ethical challenge today and, in the future, to be of no less importance. Compliance with the basic ethical principles of medical ethics, which, regardless of time-varying relationships between doctors and patients, can be derived from two basic rules: "Primum non nocere" (Most of all, do not harm) and "Salus aegroti suprema lex" (Patient's health is the highest law) should still remain in force.

Ethical decision-making and resolution of controversial issues in the field of current medicine, healthcare, or the medical profession is no longer a matter solely for the professional community, but also for social discussions, collective decision-making or legal acts. We imply that the current ethical issues that we have shortly mentioned, cannot be solved only within the medical profession or within the scientific community, that these are actually societal, economic, legislative, political or judicial issues. Today, in some countries, it is increasingly possible to meet the "services" of ethics commissions, ethics professionals (experts) who are able to understand important ethical problems in medicine and healthcare and help with their solution. Although the need for ethics professionals (experts) in our country, unfortunately, is still underestimated and unacceptable, we record a unique effort to develop ethics in medicine and healthcare at a professional level even in our country, despite the still persistent belief that "ethics is just a matter of intuition for doctors, scientists and other healthcare workers, and that it is therefore not necessary to develop it on a professional level" (Šimek, 2015, p. 99).

¹² According to ML McGowan's study (Urologic Oncology, 2014), in the field of personalized medicine with an emphasis on oncology urology, four basic issues can be encountered: informed consent to genetic tests and therapy, the question of the different quality of care providers, the question of what the insurance companies cover and, last but not least, to ask whether the systems will have enough resources in connection with the introduction of personalized medicine.

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