



ORIGINAL ARTICLE

Selected issues related to the role of clinical psychologists.

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Introduction

Healthcare is frequently considered as very complex industry. However, the history of development of medicine clearly indicates that we have arrived to the current stage of practice through long, sinuous and bumpy road. During centuries, when progressing at variable speed, the concepts of cure and care were evolving in the larger framework of religion, philosophy, science and art of acting, of doing the specific things. But also of understanding what it means to be a physician or a patient.

The scientific basis of western healthcare is relatively young, about 3 centuries, still incomplete, but rapidly growing.

At the core of all this inter-dependency and framework, one evident and decisive element was always present: direct contact and relationship between sick person and trustful, apparently savvy physician or healer. Together they have been successful or failed to obtain the expected results. What means e.g. diminishing pain and infirmity, warranting desired degree of autonomy, saving life or enabling to maintain dignity face to inevitable exit? This relationship remains still and is the core of healthcare, independently of modification of other, external elements of the whole framework shaped by

multiple, potent factors. Not only by progress in basic science and technology but also by demographics, economy and politics.

Inside the obvious structure of the existing healthcare system and its determination by appropriate policies, laws, rules, guidelines, protective measures, licences, certifications, accreditation methods, specific factors play enormous role at the bottom of the system i.e. in the « field activities » - the human factors.

Their definition seems recently considered as obvious, banal, even abused or ridiculized. But, in fact, this general notion has very rich content. Its importance is rarely well understood.

Let's mention, for starters, some issues – ask some questions.

What does the notion of disease mean to a patient, a doctor or a politician? What it means to be "healthy"?

How is doctor reasoning in face of signs and symptoms the patient is presenting with? How is he making his decisions? How does his personality or his ballast of combined professional and personal stress determine his relation to the specific patient on a given day?



How is a patient responding to dysfunction of his body or mind (if able to do so)? Why is he over-complying, or on the contrary, neglecting his symptoms or disturbed functioning? Is he rather risk-prone or risk-avoiding personality? Is he critical in his perception of the reality, or naive with tendency to self-illusion?

In general how fragile or how robust are both "partners" in a doctor-patient relationship? It is obvious that following the rules, guidelines, ethical codes or legal principles alone is not sufficient to determine adequate behaviour. Frequently, empathy and fine, friendly words are essential in building the trust and helping both patients, their families and doctors to maintain good contact and work together to obtain desired results. And before all, to avoid mistakes, errors, and probable harm.

Such task is only apparently simple. Every day brings in all Western Countries alerts on unexpected, adverse events. Some caused by the not-so-perfect system but many resulting from human "nature", as well as from incomplete understanding of themselves.

The curricula in education of health professionals are frequently missing some essential points. Examples of good practice from teachers are occasionally absent. The principle: "do what you preach" is not always respected.

The "health literacy" in the society is improving, but is still not good enough. Some issues are for various reasons (societal, political, religious) still considered as a kind of "taboo".

Not everywhere the healthcare systems became really the institutions with memory i.e. self-learning and auto-correcting.

For all parties there is an undeniable need for involvement and assistance from professionals in psychology to overcome the difficulties and to prevent any kind of harm.

Let us first draft some general features determining the environment of doctor-patient interaction. Thereafter, some examples of "medical errors" will be shown as situations where the involvement of psychologist can be of importance in both: solving acute critical problems and contributing to prevention of harmful complications.

General issues – understanding the reality, making judgements and decisions

Simplified, for the purpose of this paper, one can distinguish three kinds of reality:

- a) Objective (existing independently from our observation and perception)
- b) Subjective (perceived by an individual or a group)
- c) Consensus reality (result of observation and debate by a skewed group of people arbitrarily deciding what they consider as unique and true reality. This is also called "groupthink" phenomenon.

Type B reality can be subject to unconscious or unintended distortions or perception errors resulting in large range of consequences from: benign to serious.

Type C is per se very dangerous, especially when it categorically excludes divergent



opinions and proposes fanatical "reality enforcement" allowing even the social or physical exclusion of adversaries. It must be clearly distinguished from democratic open discussion and search for common opinion in scientific or social matters (e.g. in the USA model of National Institutes of Health or State Oregon "consensus conferences").

More specifically Chomsky and Hermann (1988 and 2008) have explained the mechanisms of creation of a kind of "consensus reality" in the USA by big corporations or government, instrumenting the mass media in the sense of "editorial bias" [1]. Some important incidents in large application of medicaments or medical devices alerted international medical community and consumers about the dangers of such biased information for practice of medicine.

Let us only briefly mention the controversy related to "Vioxx" medications - with serious cardiac side-effects that have been discovered when these drugs started to be largely prescribed. The initial post-marketing surveillance was not adequate, and the company denied the causal relationship. More recently one producer of breast implants (P.I.P., France) ignored the warning of an US regulating agency related to bad manufacturing practices resulting in ruptures of the capsule covering the gel inside. More: the producer started to use, cheaper industrial substance, biologically incompatible. Combination of ruptures with toxic gel harmed several thousand of women worldwide. French regulatory agency initiated the investigation only after the media presented large number of complications in patients from several countries. Health authorities over-

reacted indicating necessity to remove, and eventually replace, the implants. Possible trauma, psychic shock and cost were considered as enormous. National Health System in the UK exhibited more equilibrated and reasonable reaction: stop the use of P.I.P, reimburse the control examination by a specialist, and pay for all necessary interventions.

Chomsky, Hermann and their followers when warning about the negative outcomes of distortions of reality, have underlined the right of the society to be correctly informed. They identified also the need for better education and for development of a "framework of understanding" of critical issues, that can be equivalent e.g. to improvement of health literacy of the society. It is clear that adequate perception of reality and understanding of observed facts by conscious people, is one of the conditions of medical reasoning and decisions in favour of patients. Everybody can accept such primary requirement. However not every health professional, and probably the majority of patients, are not aware of cognitive errors. Such errors are more frequent than one can imagine. In clinical medicine the danger of confirmation errors i.e. of acceptance only of facts reinforcing pre-existing doctor's opinion which is based mostly on his own past experience, on spurious similarity, and categorical exclusion of any alternative. False analogy to once seen combination of signs or symptoms (distorted memory of recognition patterns), means also sectorial blindness to other signs present currently in the new case.

This kind of inadequate interpretation of facts was frequently described in cases of coronary heart disease or myocardial infarction (MI,



please see further the case quoted after the initiator of "Sorry Works" programme). On the contrary, I know the report about the fate of a patient in Cracow (Poland) presenting with retrosternal pain, who was diagnosed as MI despite a normal ECG and absence of biological markers. The evidence of a small amount of liquid (blood) in pericardium was ignored. The doctors hesitated between coronary disease and inflammation of lower oesophagus. They performed the oesophago-gastroscopy without discovering any lesion, but resulting in severe aggravation of pain deeply in his chest. Patient died from an acute progression of dissection of ascending part of the aorta and massive bleeding.

Complete list of cognitive errors is long, beyond of the purpose of this paper, and certainly well known to clinical psychologists.

Some errors are quite simple e.g. effect of frequent exposition to the problem or to a person, illusion of control, underestimating of probability, anchoring, various mechanism of auto-defence.

Frequent are also cognitive distortions described e.g. by D. Burns (2006) such as thinking in categories of "everything or nothing" or filtering the observations, i.e. focusing only on one category of facts or events - either positive or negative - and ignoring the contrary.

It is also worth to recall the frequency in healthcare of the effect described by Kruger and Dunning: the people not well educated, and with not enough experience have the tendency to overestimate their competency. On the contrary the savvy people frequently underestimate their

capability and skills. Correct interpretation of facts and attitudes should lead to proceeding with assessments, to judgements and to decisions. The judgement, as part of medical reasoning can be, in the eyes of some people, considered as questionable. They are not able to adequately interpret the principle of biblical origin: "do not be judgmental". However, what matters in clinical environment is the subject and the content of the judgement. One must correctly judge the situation, the risk, and even the personality of people involved in a medical intervention. Certainly, some discretion is necessary: the judgment should not focus on some possible negative aspects of individuals.

But the team must be clear about the competences of its members, as well as about some possible negative features/habits of the patient and/or his family. Here clinical psychologists can play a very important role in specific cases and in continuous education. The psychology of decision-making in healthcare is a critical factor at all levels of the system. The traditional option of either inductive or deductive methods has been in the last decades challenged by epochal studies and publications made by A. Tversky and D. Kahneman [2].

The statement that some decisions in clinical medicine must be made rapidly under pressure of time, in face of worsening vital parameters and possible death of patient, is a truism. It is also true that in some situations, and on selected levels of the system, there is enough time to analyse all involved factors and to test several options. Kahneman and Tversky have described the two quite different types of mental processes during decision making.



They have discovered that some people replace well studied and justified decisions with almost spontaneous quick conclusions and decision in "a blink of eye" or "from the gut". Their program called "Heuristics and biases" concluded that people are capable to express quickly their estimation of probability and of outcomes of an action. Essential for subsequent decision is their conviction about the advantages or losses resulting from decisions made. These studies confirmed earlier works and hypothesis by psychologist K. Stanovich and R. West (2000) about individual differences in reasoning. In summary Kahneman (2011) presented his works as a "prospect theory" and distinguished 3 relevant effects [2]:

Effect of certainty means that many people prefer decisions assuring certain gain, or positive result of any kind of actions, despite the probability that much higher win is possible, but under considerable risk.

Effect of reflection. Even risk-averse people are ready to make decisions charged with risk of unknown dimension, when they suspect that standard, "quiet" alternatives bear high probability of unsatisfactory outcomes or even almost certain loss.

Effect of isolation means simplification of problems or alternative solutions, with focus on differences between them rather than on similarity. Thus some critical issues can be consciously neglected or just scotomized.

The concept of framing, i.e. of presentation of an issue to be decided upon, is very important. For instance, when for a serious disease surgical therapy is presented as data on average percentage of successful results e.g. 80%, the patients are usually prone to agree.

If the explanation starts with mention of 20% of failures including 10% of fatalities, the patients and/or their families are more reluctant to agree, and ask for time to think over the critical situation or demand a second opinion.

All these remarks are based on experience and studies made mainly under standard or routine situations in provision of care. It remains to be seen if they will be still valid in the coming future because once again the healthcare is rapidly changing.

But even now, the epidemics of the so called medical errors or adverse events (AE) require involvement of psychologically skilled professionals to correctly resolve all problems, after harm was made and relationship between the patient and medical team, as well as the whole system, were frequently very disturbed.

Selected important problems in case of adverse events. Tasks for clinical psychologists

The adverse events in healthcare are as old as the history of medicine. They have been known under various names e.g. as "error of medical art", complications, accidents in treatment, mistakes, negligence, etc.

My personal observations, experience and preventive action started many years before the report of US Institute of Medicine ("To err is human, 2000) initiated systematic, analytic and preventive approach worldwide. In 1976 I have presented to the Faculty of Medicine in Bern the data and concept of risk related to interventions in neuroradiology, stressing upon the ratio between the value of obtained diagnostic



information and harmful side-effects (the presentation may be seen on: <http://kohasso.neostrada.pl/wjomi/RatioDiagnostica.pdf>). At the same point, big progress was made in studies concerning safety improvement in several high-risk industries (chemical, transportation, nuclear). The importance, and distinction between systemic and human factors was underlined.

Many analogies with what is happening in healthcare have been made – several improvements were proposed. The fact of failures in medical activities progressively lost the status of "taboo". They are not an exception. In general one can admit that medical activities lead to 3% of undesired events (e.g. see the databank of the Swiss Internal Medicine Doctors by visiting www.komplikationen.ch). The WHO warns that up to 12% of hospitalized patients can be harmed.

In Poland the effort of several professional and governmental organizations led first to better understanding of the problem and to a range of preventive measures. The attempt was also made to agree on practical working terminology, since the name of "error" was the subject of controversies e.g. between doctors, lawyers and administration. The working group of health professionals, mainly doctors adopted for daily use in Polish the words: "zdarzenie niepożądane" (ZN). It should be understood as unexpected, mostly sudden event, not related to the "normal" course of the disease or accident, resulting in either exposure of patient to severe risk or causing significant harm (including death). The group following the initiative of the editorial house "Medycyna Praktyczna" published several introductory articles

explaining the frequency, the causes and the consequences of AE/ZN [3, 4]. In my book published in Polish in 2013, and containing a mix of autobiographical, historical, philosophical and ethical topics two chapters are devoted to quality and safety of care and to related psychological/ethical ethical problems [3].

Therefore, in this article only some important issues will be mentioned to point out the importance of clinical psychology in solving the problems around AE.

The starting point is that AE are result of a combination of, frequently latent, deficits in the system and inborn imperfection of human beings. For instance, we make in average 3% of errors when reading the monitoring instruments of any kind. We act inadequately under stress. Humans have limited ability to absorb, understand and analyse intense flow of information from different sources at once. We are distracted by noise or unusual light sources. We are rapidly subject to cognitive overload, to errors in perception and interpretation of reality, to illusions. Our memory is not perfect. Recent progress in neurophysiology and excellent imaging techniques allow us better to understand our reactions, behaviour and decisions (e.g. Damasio A. "Self coming to mind" 2010 or Smith D. "Why we lie" 2009) [5, 6].

When we feel endangered by unexpected event or by our own erroneous decisions and behaviour, we subconsciously mobilize our psychological defence mechanism e.g. start lying. Other forms also frequently emerge such as rationalization, transfer of responsibility, acting-out, distortion of reality. All of these



have as the goal to diminish the fear and the feeling of culpability. Several psychological issues are related to sequential stages of follow-up after an AE such as:

- Disclosure, adequate transfer of information to the authorities;
- Information given to the patient and to his family;
- Correct behaviour, empathy and assistance, apology;
- Maintenance of correct doctor-patient relationship ("you will not be left alone");
- Honesty when participating in investigation of the event or writing an expert report;
- Negotiation of an out-of-court compensation or statements in the court;
- Not so seldom psychological support for the members of the medical team, especially if they feel as "second victims" of a dramatic AE.

There are usually "after harm" dilemmas emerging in matters of truth-telling, secrecy and protection of personality of any or of all involved person. According to several studies, the transparency in AE situations is rarely optimal. As an example, an excerpt of data from USA survey published in Health Affairs in 2012:

- 28% of physicians oppose truth-telling;
- 34% don't agree with disclosure to patients - victims of an AE;
- 20% report that they didn't disclose an AE last year;
- 55% explain that they have given patients better prognosis than it was justified.

The classical publication by Sissela Bok from Boston (1989) summarizes some essential points [7]. Truth-telling was not mentioned in Hippocrates Oath. Doctor is obliged to obtain maximum information about the patient's illness. However, sharing his knowledge about the true status of the sick person must be very cautious, easy to understand, and making sense. Meyer (1969) stated that knowing truth can be very important for patients, but should not add supplementary harm to their status. Therefore incomplete or delayed communication of bad information is acceptable if, otherwise, they would negatively influence his condition or present an obstacle to pass away in dignity.

The doctors are usually aware about uncertainty of diagnosis or prognosis. Therefore they should be considered as adequate people to give patient the weighted information. However frequently there are many specialists involved in the treatment of a patient. They must not always agree in all clinical matters or e.g. regarding the prognosis.

In certain critical situations, some health professionals can argue that to withhold the whole truth can be considered as more harmful to patient as full disclosure. In some cases they can be right, but diverging opinions can be perceived by patient, or his family, and disturb the patient's confidence in doctors. The psychologists can play an important role in mastering the "after harm" situations. They can help to make the choice in answering e.g. such questions:

Who, when, how detailed, and how carefully can convey bad news to a patient or to his family?



Even if in most countries this task is traditionally accomplished by the attending physician, in some health organisations risk manager can be charged with such, frequently difficult, obligation. One can also argue that doctor involved in an AE can be shocked by the event, not willing or not able to talk to patients.

I have personally experienced such a situation (in the University Hospital of Geneva) when the responsible physician, very honest, but emotionally fragile person, asked me as a neuroradiologist - not involved - but familiar with the patient, to alert the family about the critical situation after surgical attempt to extirpate a malignant brain tumour. Frequently the physician, or other member of the team can, in such a moment, not understand exactly what happened. What is the reason of worsening of the vital parameters, or what caused the sudden patient's death? Not so seldom the recognition of an error can be included in first, instantaneous information. Honestly, but occasionally, not accurately. One must also be aware that non-verbal communication, or lack of any contact represent very strong messages, which could also can be falsely interpreted, especially by the patient's family.

There are many standardized procedures to communicate effectively among the health professionals. Some can be applied also when informing the patients or at least can help to structure a message. SBAR (Situation, Basic issues, Analysis, Recommendations) is one of them; very helpful in inter-professional communication.

Speaking to patients or to their representatives is a more delicate task, and must be adequately prepared. After an AE one should:

- learn and analyse the facts, circumstances and probable causes;
- make appropriate choice of time and place for this difficult conversation;
- prepare the optional scenario: goal, content, conclusions; be ready to answer even very surprising or difficult questions.

In Poland such procedure is known under the principles of K-O-P-E-Z (Konfrontacja, Opieka, Przeprosiny, Empatia, Zapewnienie) and includes:

- Open presentation of the problem;
- Assurance of continuity of adequate care and rehabilitation;
- Sincere apology;
- Empathy expressed warmly, with patience, reinforced even by delicate touch;
- Promise that lessons will be made from harm and suffering caused, through mistakes and errors; that preventive measures will be introduced; the procedures leading to due compensation will be respected.

The importance of apology and empathy was the reason for establishment of a valuable programme, and growing multidisciplinary and social movement in the USA called "Sorry Works" (www.sorryworks.net, see the ref. [8]). This programme was developed by Douglas Wojcieszak (US lawyer with Polish roots) after serious diagnostic error resulted in the death of his younger brother [8]. This drama was deepened through harsh, unfriendly reaction of



doctors, as well as by defensive behaviour of hospital administration. No empathy at all, no disclosure, no apology. The case was finally brought to court by the family. After several years the hospital admitted mishandling of this acute case of MI and did pay a significant sum as compensation and reparation.

Further exploration of similar cases clearly indicated that patients and their families are willing to admit some adverse events, but require explanation and apology. They also prefer to negotiate the compensation directly with a doctor or an organisation, than bring the case to the court. Several hospital chains and Health Maintenance Organisations (HMOs) in the USA did adopt "Sorry Works" recommendations. They have experienced proven economics in solving the "after harm" disputes. The gain in diminishing the psychic trauma to patients and their families is not so easy to quantify, but certainly very important. Thousands of health professionals are already trained by Doug's team, where doctors, psychologists and lawyers cooperate. Transparency, apology and empathy became trendy in many States in North America and progressively diffuse to other countries. "Sorry Works" programme was presented in Warsaw during the annual conference "Interna 2011" [8].

Remarks on probable future developments

During last decades the practice of medicine was strongly influenced by application of codified knowledge (e.g. Evidence Based Medicine, meta-analysis of studies, Cochrane Library). Even if many of the used guidelines,

clinical protocols or checklists didn't have so rigorous basis. They presented frequently a mix of solid science and experience from daily clinical practice. Some of the arguments for any kind of codification were related to the need to improve the quality of care and the necessity to control the cost. The international code of diseases was progressively updated by the WHO. The attempt was also made to classify the mental diseases on statistical basis. Several programmes explored the effectiveness of linking the code of diagnoses to cost of treatment or to payment for medical procedures (e.g. Diagnostic Related Groups – DRGs or various tariffs). All this can be considered as permanent "work in progress". It is an experiment how to put the infinity of factors and hardly estimable uncertainty in a rigid framework.

It was not always so and such trend is currently under revision. Big changes are under way. In order to put the things in better perspective it may be worth to recall briefly the understanding of medical science and practice of medicine as it was seen by a brilliant Polish doctor from the beginning of the XX century - Ludwig Fleck (1896–1961) [9]. Fleck has described during the years 1935/36 his concept in several papers and in the book "Genesis and Development of a Scientific Fact". He was rapidly forgotten in the period around the World War II and rediscovered 40 years later, when his work was translated in English. The essence of Fleck's concepts was not far from the later Theory of Chaos. He doubted if there is fully objective knowledge. He postulated the following: truth in science is rather the function of a particular manner of thinking by a kind of group considered as "thought-collective".



According to him diseases do not exist in nature but are constructed by physicians for practical or didactic purposes. In his view it was easier to cure the patient than really know what his disease is. The very nature of medicine is more art than science. The definition of disease is arbitrary. For instance "the sore throat" has different meanings for clinician, bacteriologist, or an epidemiologist. Even more questionable were the concepts in oncology, as identified in his time, and incoherence of proposing the treatment without really understanding the cause of such disease (quoted after editorial in the Cancer Journal of 1998 [9]). The critical, and partially visionary speculations didn't hinder Fleck from achievement as a microbiologist working initially under the direction of famous Rudolf Weigl and in contributions to the production of the vaccine against typhus. His theories became positively revisited after publication by T. Kuhn of his breakthrough book "Structure of Scientific Revolutions", largely applauded by scientific community [10].

Another kind of "revolution" was predicted by excellent clinician from Boston prof. Arnold Relman during years 1970-80. He accurately pointed on undergoing developments in the society, business and economy forcing the doctors to act with more transparency, evaluation and accountability. The concepts of quality improvement, respect for patients and shared decision-making followed. Some professionals have named this period as beginning of the "Era of Patients" (Reiser JS, 1980).

Today, we witness again extraordinary progress in basic sciences and technologies, immediately influencing the practice of medicine. In a fascinating book "Creative Destruction Medicine. How the digital revolution will create better health care" prof. Eric Topol summarizes the current state of progress in technology and science [11]. As an excellent cardiologist, with profound knowledge of medical genetics as addition, he drafted realistic vision of determinants of future medical practice. The research and field experience in his Institute for Translational Medicine in Scripps Institute in San Diego covers on one side the implementation of discoveries in medical genetics, proteomics, pharmacogenomics and nanotechnologies with, on other side, opportunities in mega-computing, and with the edge quality of sensors and information technology. In the era of explosion of social networks and the exponential growth of utilization of modern devices for communication, information and knowledge transfer, the fantasy about digital patient and digital doctor became a reality.

What it means for the relationship between health professionals and patients? What will bring to us the current possibility to gather and to analyse enormous quantity of data on health and behaviour of individuals - healthy or sick? How enlightened the future citizens will be? To what extend new possibilities of telecommunication will improve risk assessment and decision-making? Will the knowledge about the disease and treatment diminish the incertitude or fear of unknown outcomes?



Will smartphones, tablets, and video-calls replace the eye-contact between doctor and patient? Will the objective, dry information substitute doctor's intuition, experience and empathy? Could the new kind of electronic relationship become more valuable than older rituals in doctor's office or hospital? Will the frequency of adverse events diminish, or will new ones replace the old? It is probable that "health literacy" will be generally improved.

However, new diagnostic procedures and therapies will require revision of teaching materials for the professionals and explanations of innovations and new terms to the citizens/patients. It will be not enough that some specialist will understand e.g. what the importance of "snip" (single nucleoid polymorphy) is. And that in pharmacotherapy the old principle "one size fits all", i.e. the same prescription, the same dose for all patients, is no more valid.

At the same time the migration will continue and trans-border health services will increase. The issues of language, of values and expectations, of mutual understanding between multi-ethnic population of patients, as well as of healthcare workers, have been already observed. This all could mean even more need for psychological assistance and new challenges for clinical psychologists.

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