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CONTACT – communication protocol for family practitioners and specialists

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ABSTRACT

Introduction. Ability to gather and process medical data serves as a basic tool of doctor's work, which can be improved by applying communication protocols. In most cases, however, instructions presented by such models are too general and do not take into account patients' preferences.
Material and Methods. The study was carried out in the form of an electronic questionairre sent to a randomly chosen group of adult patients (N = 967). It consisted of close-ended questions about the quality of communication skills of family practitioners and specialists working at outpatient clinics and health centers.
Results. Only 21% of patients claimed that the appointment started on time. 51% mentioned disruptions during the meeting, mainly by a third party (34%). A considerable majority of physicians carried out the interview in a manner that was understood by patients, nevertheless 56.6% of the respondents felt underinformed as far as the nature of their illness was concerned – these objections were mostly expressed by patients suffering from chronic diseases.
Conclusions. Our research shows that a proper organization of work as well as observing the principles of appropriate clinical communication can facilitate doctors' performance, and thus increase both the level of patients' satisfaction and the quality of medical services.

Keywords: communication and interview skills, clinical-patient communication/relationship, cultural competence/proficiency.

Introduction

Communication between physician and patient serves as an essential tool to obtain clinical information [1]. Gaining and transferring data provided by patients determines the effectiveness of therapeutic course of action [2]. Models of communication are created in order to improve the quality of this process. Their role is to establish subsequent stages of gathering, processing and conveying information in specific medical situations (e.g. informing the patient about the negative diagnosis, poor prognosis etc.). Communication protocols constitute an important educational device that can be used to teach communication skills, both in the context of training students and raising the quality of doctors' work. What follows, the competence gained on the basis of these templates effectively improves the quality of medical activities in the clinical context [3]. As proved by the research, proper communication on the part of doctors considerably increases the sense of professional effectiveness [4] and fulfillment derived from work, which has a direct impact on the level of patients' satisfaction [5], and prevents professional burnout [6, 7]. On the other hand, defective communication deteriorates the quality of treatment, at the same time increasing its costs [8]. What is more, it is a critical factor leading to filing lawsuits against physicians [9] and it increases the risk of legal claims and accusations of abuse [10]. Most of these accusations, as evidenced by research, result from doctor-patient relationship. A quarter of these claims stems from flawed conveyance of medical information [11]. Analy-

ses reveal that a patient satisfied with medical care is likely to share a positive opinion on the received services with 5 other people. In contrast, a patient who is displeased will probably share their disappointment with 15–19 different people [12].

Considering the above, as well as bearing in mind the broad impact of communication on both the quality and effectiveness of medical activities, we have undertaken to construct a tool which could help family practitioners and specialists working at health clinics to properly collect information, process it and transfer it to patients. At the same time it would guarantee a high standard of medical services and maximize patient satisfaction, while taking into account the structurally limited time of a visit.

Material and Methods

The research was carried out between June 15 and August 15, 2015 with the use of an original, self-made electronic questionnaire. The survey was published on non-commercial Internet research website (www.e-badania.pl) dedicated to professional sociological research. The respondents were informed that their participation in the study was anonymous and voluntary. The questionnaire consisted of highly standardized, close-ended questions. A random group of adult patients (n = 967) was asked to provide answers to the questions concerning their evaluation of medical services as well as their own preferences related to their contacts with family practitioners and specialists working at outpatient clinics and health centers.

For the purposes of statistical analysis a software package SPSS v. 16.0. was applied. For the analysis of correlations between discrete variables and statistical heterogeneity of the groups Pearson's chi-square test was used. Differences for $p < 0.05$ were considered statistically significant. The opinions and evaluations provided by the respondents were confronted with socio-demographic variables (age, sex), health variables (chronicity of health problems) and medical variables (the place of encounter with the physician, the form of payment for the visit).

The present research was a cross-selectional study approved by the Independent Bioethics Commission for Research at the University of Gdansk.

Results

Thanks to the use of an electronic tool we have reached a relatively numerous (n = 967) and diverse group of respondents. On the other hand, it contributed to an overrepresentation of women and young people with an academic degree, which is characteristic of this type of research. 86% of the surveyed were women, while only 14% were men. Over 50% of the participants were people below the age of 30 (58%). Moreover, half of them graduated from universities. 23.8% of the respondents were between 31 and 40, 10% were between 41 and 50, 4.9% were between 51 and 60, and only 3% were over 60. Most often their last visit took place at public health centers (50.5%), followed by public specialist clinics (21.2%), private health centers (15.8%), private doctors' offices (8.7%) and private specialist clinics (3.8%). In most cases the cost of the visit was covered by the National Health Fund (77%). Otherwise, it was paid for by the patients themselves (17.5%) or by independent health insurance agencies (4.6%). Exactly 0.9% of the respondents could not remember the method of payment.

Participants were asked to provide details concerning their latest visit at the family practitioner's or specialist's office. A common problem reported by the respondents was insufficient length of a visit, which had a negative impact on their overall evaluation. Only one in five patients (21%) claimed that the appointment started on time. The others had to wait for the meeting; one third of the respondents spent more than 20 minutes in the waiting room. Additionally, half of the surveyed mentioned interruptions during their visit, mainly caused by the appearance of a third party (34%) at the office, which was probably one of the sources of delays.

Time shortage can also be observed in the context of another question: over half of the respondents (57%) concluded that the doctor did not dedicate enough time to the conversation during the visit. The opinions discussed above were juxtaposed against health and medical variables, yet no statistically significant differences were observed among the respondents' statements. This means that, contrary to expectations, the delays within the schedule were reported by the patients provided with medical services at public health centers and clinics as well as at private offices. The method of payment also did not have any impact on the subjective evaluation concerning time dedicated by a physician to the conversation with the patient.

The next analyzed problem pertains to medical jargon used during a visit which is incomprehensible to the patients. Exactly 37% of the respondents had difficulty understanding the message conveyed by a doctor, while over a half (58%) had no such problem. The survey also contained a question concerning

impersonal forms of address used by a doctor during an interview with a patient. The occurrence of such expressions was reported by 30% of the participants. In the course of statistical analysis the influence of socio-demographic aspects (sex and age) on the frequency of using impersonal forms by a doctor [in Polish impersonal forms, which stem from specific conjugation of verbs and inflection of nouns, may be considered impolite] was observed. As far as sex is concerned, 31% of women and 20% of men were addressed in such a manner during the last visit (*chi^2* = 6.393; *p* = 0.041). Taking into account the age, it becomes clear that the younger the respondent, the more frequent the use of impersonal forms by a doctor.

At this point it is worth pointing out that orders given in an impersonal form are inacceptable for the majority of patients. 64% of the respondents are definitely against such forms, while 26% rather do not approve of them (**Table 1**). In this case an influence of socio-demographic variables (such as sex, age, the place of residence and the level of education) on patient preferences was not observed.

The study has also revealed which questions – typical for communication with a doctor – were delivered to the patient in a satisfactory manner, and which were not. It turned out that in almost half of the cases (49%) the physician acquainted the patient with a plan of therapy. A similar number of respondents claimed that the doctor explained to a sufficient degree the necessity of taking additional tests (46.5%) and consulting other specialists (45.6%). The subject of dosage and application of drugs raised the least objections: 79% of the surveyed expressed no reservations related to this aspect of communication with a physician. On the other hand, the largest group of respondents felt underinformed as far as their disease entity is concerned. Only 38% of patients received a satisfactory amount of information on this subject, while over half of the surveyed (57%) claimed otherwise (**Table 2**). It is worth noting that lack of sufficient information about the necessity of taking further tests, consulting a specialist, drug dosage and the nature of an illness was reported more frequently by patients suffering from chronic diseases. It follows that this health variable indeed has an impact on the subjective evaluation of the amount/quality of information delivered by the doctor (**Table 2**).

From the diagnostic point of view, carrying out an interview is an important element of communication with a patient (**Table 3**). Therefore, the participants were asked to evaluate this part of a conversation, again in relation to their latest visit. The majority of them expressed a positive opinion when asked whether a doctor created conditions which enable a free conversation (69%) and whether he or she used clear, comprehensible language (79%). Almost half of the respondents (49%) confirmed that during the interview the doctor was asking precise, yes/no questions. Similar number of the surveyed (50%) positively evaluated doctors' involvement in dispelling any doubts as well as answering patients' questions. In contrast, as for making sure whether the patient understood the most significant information, only one in three respondents (33%) positively evaluated this aspect of an interview,

Table 1. Elements of communication used by a doctor during the latest visit

Categories of response	Yes	No	Not applicable or don't remember
	% of *n* = 967		
Did the doctor during the latest visit...			
address you in an impersonal form?	29.6	61.4	9.0
use incomprehensible terms and phrases?	36.6	57.6	5.8
present you with a plan of therapy?	49.1	43.8	7.0
Did the doctor explain to a sufficient degree...			
the necessity of taking additional tests?	46.5	41.9	11.6
the necessity of consulting other specialists?	45.6	36.7	17.7
the method of dosing and applying drugs?	79.1	15.7	5.2
the nature of your illness?	37.7	56.6	5.8
While gathering information, did the doctor...			
aske precise questions concerning your illness?	48.8	35.1	16.1
create conditions enabling free conversation?	69.1	20.2	10.8
use clear, comprehensible language?	79.1	14.9	6.0
dispel all doubts?	49.9	41.9	8.2
make sure that all information was understood?	33.4	57.2	9.4

Table 2. Subjective sense of being underinformed and type of illness

Patients who felt underinformed about...	Are you treated for a chronic disease?	
	Yes	No
the necessity of taking additional tests (*n* = 405)	210 (45.9%)	195 (38.3%)
	chi^2 = 12.536; *p* = 0.002	
the necessity of consulting other specialists (*n* = 355)	180 (39.3%)	175 (34.4%)
	chi^2 = 17.807; *p* < 0.001	
the method of dosing and applying drugs (*n* = 152)	77 (16.8%)	75 (14.7%)
	chi^2 = 6.779; *p* = 0.034	
the nature of their illness (*n* = 546)	287 (62.7%)	259 (50.9%)
	chi^2 = 23.148; *p* < 0.001	

while 57% expressed negative opinion. In the case of assessing comprehensibility of language and dispelling doubts, the health variable – treating chronic diseases – is of considerable significance. Negative evaluation of these two aspects of communication is much more common among patients suffering from chronic illnesses than among the ones who do not cope with such ailments.

Discussion

The results of the survey reveal some discrepancies between patients' expectations and certain aspects of medical practice. The first significant problem pertains to the organization of visits. While answering the questions, participants frequently mentioned delays disturbing the schedule of appointments. The next important inconvenience stemmed from interruptions during a visit, caused mainly by third parties. This problem was also reported in other research [13]. In our opinion this sort of incidents during medical encounters have a negative impact on the evaluation of the quality of medical services. What is more, they contribute to the conviction that doctors do not dedicate enough time to conversations with their patients.

Our study has also revealed some deficiency as far as conveying medical information is concerned. Patients expect physicians to present a plan of therapy and to deliver information concerning the nature of their illness during a visit. That also expect their doctors to use comprehensible language and create atmosphere conducive to openness. Therefore, we suggest that doctors should make sure whether their patients understood the most significant information discussed during a visit.

The obtained answers together with a detailed analysis of the current results of research in the field of clinical communication published in indexed medical journals served as the basis for drawing up a medical communication procedure (**Table 3**). With the mnemonic acronym CONTACT (context, organization, niceties, taking stock, assimilation, counseling, taking care) we propose a communication pattern which takes into account the nature of work performed by family practitioners and specialists.

C – context (preparation)

A doctor, when alone in his or her office, can prepare for the meeting with a patient, carefully analyzing all the relevant information (identification of the patient, analyzing patient's medical history, checking the results of previous tests etc.). This activity does not take much time and can positively affect both the quality and the duration of the visit. A physician who knows the results of the latest tests and who remembers the ailments of his or her patients as well as doses of previously prescribed medicine etc. is more likely to be highly evaluated (i.e. regarded as a caring, emphatic and competent person). Factors hindering communication such as using a computer while having a conversation with the patient or pauses between doctor's comments, who analyzes the data during the meeting increase the likelihood of negative evaluation of the visit by the patients [13].

O – organization (work environment)

Proper organization of the workplace has a considerable influence on the quality of work. There should be enough time between visits to arrange documentation, air the office, if need be, or carry out all the necessary steps to ensure that proper hygiene is observed. Proper organization of work also concerns establishing the rules of calling patients in. The right approach is to invite them to the office by using their name. The doctor, apart from identifying the patient, can also settle the situation outside the office. Eliminating any interference from third parties during the visit significantly raises its quality [14].

Table 3. The model of the CONTACT communication procedure

Context	Preparing for the encounter with a patient	personal identification of a patient analyzing patient's medical history checking documentation checking the results of previous tests
Organization	Organization of the workplace	time for arranging documentation airing the office, if necessary activities connected with occupational hygiene
	Establishing the rules of calling patients in	breaks between visits inviting patients to the office by using their names (identification of patients)
Niceties	Greeting	calling patients in by using their full names shaking hands self-introduction (during the first visit)*
	Confirming/checking patient's personal data	
	Initiating a converstation	
Taking stock	Interview	open and close-ended questions probing questions active listening
	Explaining all actions, step by step	explaining wyjaśnienie podejmowanych czynności giving clear orders formulating clear questions
	Thanking the patient for the examination	
	Making a diagnosis or a diagnostic hypothesis	
	Noting down the results in the documentation the results	
Assimilation	Conveying the results of the examination	the cause of illness mechanisms governing the development of the illness possible consequences or complications
	Presenting a plan of the following medical/diagnostic measures	if possible, presenting alternative diagnostic and therapeutic methods
	Explaining the therapeutic process	explaining the effects of the prescribed medicines explaining the necessity of taking additional tests and/or consulting another specialist
	Obtaining patient's approval of the therapy/ permit for further tests	
	Dispelling patient's doubts	
Counseling	Explaining the method of dosing drugs/ the rules of conduct related with a particular ailment,	if necessary, providng additional information concerning diet, exercise, everyday activity and hygiene
	Referring a patient to a specialist/consultant*	providing a patient with relevant details (the place and time of such a visit)* indicating where such information can be obtained*
	Giving guidelines	indicating a source of information that the patient can use in order to expand the knowledge concerning their illness
	Handing over the documentation	prescriptions, referrals other information
Taking care	Repeating the most important information	Summing up the visit by repeating all the key information concerning a diagnosis, therapy, consultations, further tests etc.
	Providing a sense of security	mental suport*
	Providing support*	social support (informing the relatives) institutional support (social services etc)*
	End of the visit	thanking the patient for the meeting a goodbye handshake seeing the patient to the door

Note: *if applic able / if necessary

N – niceties (creating communication context)

Evaluation of both patients' satisfaction and the quality of medical services to a large extent depends on the doctor's ability to establish relationship with the patient [15]. Greeting a patient with a handshake is a simple gesture which is an excellent way to open the communication space. Haptic gestures, being strong stimuli, enhance the message, and, in a context of building up empathy, non-verbal behaviors play a significant role [16]. The abovementioned form of greet-

ing is expected by the majority of patients [17]. This moment is also a perfect opportunity to obtain permission for a third party (such as students or interns) to be present in the medical office during the visit, as well as to indicate to the patient (and/or the accompanying person) the chair which they are supposed to occupy. Initiating the conversation is another key factor. At this point it would be worthwhile to ask about the patient's mood before passing on to inquiring about the actual reason of the visit.

T – taking stock (gathering and arranging medical data)

One of the most important stages of a medical encounter is carrying out both an interview and a physical examination. Appropriate gathering and arranging of clinical data determines the accuracy of a diagnosis, the course of a therapeutic process and the evaluation of a physician's work. Asking open and close-ended questions, which enhance both active listening and empathy of a doctor, not only increases the level of trust [18], but also has a direct influence on clinical effects. In a properly functioning communication space, patients share much more clinically relevant biomedical and psychosocial information with their doctors [19]. The majority of diagnostically significant data comes from medical history, which is a part of the interview. More often than not physicians do not provide patients with sufficient amount of time to describe this part of medical interview. Therefore, while asking introductory open-ended questions, it is important to listen to the patient without any interference, which is a very common mistake [20]. When interrupted, the patient often refrains from describing all symptoms [21], which, in consequence, hampers the whole diagnostic process. After finishing a physical examination a doctor should thank the patient and only then pass on to noting down the results. When the doctor fills the papers, the patient has time to put their clothes back on.

A – assimilation (transfer of information)

Conveying the results of the examination and the absorption of the received information by the patient constitutes a significant part of the whole visit. The degree to which the doctor's recommendations are understood determines the subsequent steps taken by the patient. The deeper the understanding of the cause of illness, its mechanisms and therapeutic activities, the more consistent the observance of doctor's recommendations, the deeper involvement in the therapeutic process and the more efficient cooperation based on the patient's trust [22]. After presenting the results of the examination and making a diagnosis (or a diagnostic hypothesis which requires further verification), a physician should suggest a plan of following medical measures to be taken. Patient's involvement in the decision-making process (concerning the choice of diagnostic or therapeutic methods, e.g. preliminary consent to a medical examination, the choice of medicines) results in sharing responsibility for the therapeutic process, which in turn, as proved by the research, increases the efficiency of medical action while at the same time decreasing its costs [23–25]. Explaining particular stages of medical treatment and the necessity of taking further tests or visiting a specialist, along with justifying the choice of prescribed medicines and presenting the possible consequences of the illness, as well as the expected effects of pharmaceutical drugs, results in a patient's deeper involvement in a therapy [26, 27]. Moreover, such approach increases the level of patient's satisfaction [28]. At this point it is essential to check whether the patient has any doubts or reservations concerning the proposed treatment (e.g. to make sure that the price of a drug is acceptable) since doctors, in general, overestimate patients' ability to absorb and process medical information [29]. Accepting the therapy is the key condition for its effectiveness. Patients who did not approve of the applied treatment displayed undesirable medical effects due to their failure to comply with doctor's recommendations, which in turn led to recurrent deterioration of health condition [30].

C – counseling

This stage consists in precise explanation of the rules which are to be observed during treatment (e.g. drug dosage, rules of conduct related with a particular ailment, diet, exercise, everyday activity or hygiene). If it is necessary for a patient to consult a specialist, a doctor should provide them with relevant details (the place and time of such visit) or indicate where such information can be obtained. In certain situations it is also advisable to recommend a source of information that the patient can use in order to expand the knowledge concerning their illness. Exact therapeutic instructions should be delivered to the patient in written form (dosage, dietary restrictions etc.)

T – taking care

The last part of the visit involves summing up all the key arrangements and repeating the most significant

information. A patient should be provided with a sense of support. Signs of empathy build trust and positively affect patient's satisfaction concerning the medical encounter [31]. At the end of the visit it is advisable to thank the patient for the meeting, see them to the door and initiate a goodbye handshake.

To our mind, the above procedure is a perfect way to organize clinical space and time as well as the key verbal and non-verbal elements of the visit at the office of both family practitioners and specialists. Application of this model can effectively increase patient satisfaction, at the same time raising physicians' own evaluation of their professionalism. While preparing this template, we paid attention to the results of existing research concerning the issue of doctor-patient communication. Nevertheless, in order to verify our model of communication, it would seem indispensable to carry out randomized cohort studies, which could serve as an adequate tool to measure its effectiveness.

It needs to be pointed out that both patients' and physicians' communication preferences are always ingrained in a specific cultural context. Therefore, we suggest that they were taken into account while applying this protocol. We also believe that it is important to pay attention to structural factors such as the principles governing organization of work in outpatient clinic and health centers. Systemic limitations, the type of illness and health care context may considerably determine application of this protocol since they have direct impact on the relationship between a patient and a physician [32].

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Conflict of interest statement
The authors declare no conflict of interest.

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Informed consent and ethical approval
Informed consent was obtained from all individual participants included in the study. The research was positively evaluated and approved by the Independent Bioethics Commission for Research at the Medical University of Gdansk.

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