



Information and communication gaps in the pharmacy

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ABSTRACT

Purpose: The research focuses on the analysis of communicative situations taking place in the pharmacy. The study discusses the specific examples that highlight the incredibly complex and delicate nature of this highly challenging communication process.

Method: Through the communication theory-based interpretation of a set of examples from the work experience of the authors of the present article, a resident clinical pharmacy specialist, the paper aims to present the way in which trained specialists can be efficiently supportive, if their communication skills, situational awareness, and adaptability are trained and improved. The authors outline the incorrect and, in certain cases, ill-chosen communication strategies applied in an environment in which the participants of the communicative situation are on one hand, the pharmacists or health professionals are on the other hand, patients with different educational backgrounds and preconceptions, and of various socioeconomic status.

Results: The study also highlights those misplaced communication strategies that do not match the receiver's cognitive structure, thus impeding comprehension and leading to the non-acceptance of the information. The results demonstrate the differences between clerkship experiences. The criteria that are of primary importance in the process of information transfer are being emphasized, thus the patient receives meaningful information.

Conclusion: The examples demonstrate that statements chosen according to the receiver's linguistic background and cognitive skills play a key role in the process of understanding. As a receiver, it is important to identify the speaker's intention, to process the message, to classify, evaluate and highlight the information, to draw conclusions quickly, thus promoting understanding.

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Introduction

Following the publication of the studies "How much time for patients" [1], Weelt the need to write a series of articles, as the case discussions led us to the discovery that this highly challenging discourse has several other dimensions as well. A new special research ascertainments ascertainment of Levinson et al. [2]: "Essential to the delivery of such care are patient-centered communication skills." I have found that in international literature the theory of communication, medicine, and the author of the present article – behavioral science, communication studies – the question is analyzed, and there

are many publications at the theme [3,4]. The interpretation of these processes offers possibility for further comparison in the context of Hungarian and international research results. Our examples taken from pharmacy practice include the assessment of a communicative situation involving a patient with hearing and speech impairment, and situations that demonstrate the effect which lack of information and TV commercials have. Applying the terms of communication theory, both the patient and the pharmacist can act as *sender* and *receiver* in different communicative situations. In several cases, even the *code* [1] (*Jakobson's model* [2,3] of the

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functions of language distinguishes six elements. The code is a set of conventions or sub-codes, currently in use, to communicate meaning) [1], which is the linguistic sign system based on shared knowledge and agreement, is different, even though the speaker-patient is a highly qualified native speaker. By analyzing examples taken from the work experience of a resident clinical pharmacy specialist, both authors of the present article, we attempt to illustrate the nature of communication barriers faced by the patients. Special attention is given to the patients struck by fear or struggling with lack of knowledge and physiological disorders, as we believe, these may lead to various communication problems. From an extensive corpus of examples, only the relevant ones are being discussed here. These are empirical pieces of evidence gathered during work in the pharmacy. The literature preceding and serving as a background to our research is made up of new studies analyzing the Hungarian healthcare communication, written by János Pilling [5] and the international study by Smoot and Gonzales [6]: "Evaluating the cost-benefits of a staff communication training program designed to improve patient management skills and relieve staff stress." The theoretical base consists of Paul Grice's [7] work, Schouten and Meeuwesens [8] research, and hermeneutics [9], the theory and methodology of interpretation (the term hermeneutics was derived from the name of Hermes, the messenger of gods in Greek mythology).

Methods and Materials

Interviews had been conducted over a period of 6 months with pharmacists and doctors in order to confirm our hypothesis. Data were collected through non-representative and small sample research. This mainly consisted of dynamic non-directed interviews ($n = 24$), while structured interviews were conducted with a small number of informants ($n = 7$) in their workplace environment (n sum = 31). The socioeconomic status of informants: proportionate distribution of men and women holding MA or MSc degree, four of them being enrolled in doctoral programs. The informants living mostly in the capital or its area were aged 24 to 39 years. Through analysis, we have reached the conclusion that the main problems are the false information and communication unsupported by the evidence. These could be solved by applying Grice's fourth maxim, the maxim of manner [9], which states that the message should be clearly transmitted, so that

the information matches the partner's knowledge, avoiding obscurity of expression. This, in the cases discussed, could be interpreted as the avoidance of medical terminology. The maxim of quality should also be applied, which urges the speaker to be truthful, and not to give information that is false or is not supported by evidence [1]. A common problem encountered in the pharmacy is that patients asks for two different over the counter (OTC) drugs, but their combined use is contraindicated due to the same active substance contained. After hearing the explanation that both products contain the same active ingredient, the patient asks for the "the best, the most effective one," and this leads to a communication gap, as it is impossible to indicate the ideal OTC analgesic or antihistamine. In this situation, the primary objective is to clarify the information, thus minimizing the risk of further misunderstanding and of linguistic and psychological distortions. We believe that the focus of the research should not be restricted to the patterns and gaps of interpersonal communication. The general understanding of language and the interpretation of linguistic tools must also be considered. In the above presented communicative situation, the goal is to provide the patient with quick and acceptable information. By seeing the products containing the same active substance side by side and being told their price, the patients can better understand that the one familiar from TV commercials and the one with a different name contain the same active substance and their combined use is contraindicated.

In communication theory Grice's maxims [7] summarize the findings related to the rules of conversational logic, and these can be applied to the aforementioned communicative situation. During communication with the patient, the truthfulness and relevance conceived by the maxim of quality is essential. Applied to our example, this means that only those statements are relevant, which can be justified and explained. And to make them, the speaker must be competent and professional. It is extremely important to understand that there is no tabula-rasa interpretation (a theory according to which the mind is primarily blank or is in an empty state before receiving external impressions, therefore, there is no prior knowledge), because in the process of understanding the message transmitted by the speaker, the listener is bound by earlier experiences and the personal linguistic background. For example, a patient suffering from tonsillitis comes to see the family physician, but refuses medicines

containing penicillin as active ingredient because of her elderly mother's penicillin allergy. The patient does this even though she has not been diagnosed with sensitivity, and when taken, the active substance has never caused any side effects. But the knowledge of the severe reactions of her mother experienced (which, from a hermeneutical perspective is the receiver's individual history) is heavily influencing the process of interpretation, and on hearing the recommended therapy, the patient strongly protests. This not only makes the communication between doctor and patient more difficult, but also leads to the deletion of the previously heard information. Following the reassuring answers given by the doctor, the patient asks the same questions over again. This means that the process of understanding is being restarted, the patient's cognitive structure operates based on a new organizing principle, although she has just been informed and the therapy schedule has already been presented.

'It helped my neighbor and I also read it on the Internet'

Several research papers and non-specialist (popular science) articles deal with the Google-doctor phenomenon and the dangers implied. In the medical and pharmaceutical practice, it often happens that patients arrive with complete self-diagnosis, therapy proposal, and medication request to the specialist. Asking a few medically justified questions, the specialist can make the patient understand that the self-diagnosis or the neighbor's or acquaintance's recommendation is non-professional, and the side-effects or the worsening of symptoms can be dangerous. In this communicative situation, it is good to consider and apply Grice's fourth maxim, the maxim of manner [9]. This states that the message should be clearly transmitted, so that the information matches the partner's knowledge, avoiding obscurity of expression, and medical terminology. This would help the patient to understand and cooperate, and to develop trust. The unequivocal conclusion of research specialized on cognitive processes and communication theory questions is that the wrongly chosen and applied communicative strategy leads to the failure of comprehension and the non-acceptance of information. "Bad news and diagnosis must be shared in different ways with medical colleagues and non-professional patients" is a conventional key-sentence of university lectures. However, there might be huge

differences between non-professional patients and their relatives based on their mental status and linguistic background and skills, therefore, the message should be formulated clearly, using plain language.

Misunderstanding caused by the lack of information

During the common cold and flu season, in conversation with the specialist, patients frequently report the intake of a daily dose of 8,000 mg of Vitamin C. Most of them, however, are unaware of the severe nephrotoxic effect of such high-dose vitamin intake, not having read the package leaflet before use. Following a set of focused questions, the patients quickly admit their bad habits related to medication and vitamin intake. The phenomena caused by the lack of information leads to serious gaps and problems. This is well-illustrated by the following example, quoted from the journal *Lege Artis Medicinae* [1], in which it was originally published.

"A troubled and angry 72-year-old woman patient arrives to the family physician. She reports that although she has been taking a prescription-only sedative for a month – prescribed by the medical locum – her medical complaints are even worse, more complex than before: she experiences troubled sleep, she wakes up feeling tired, and in addition, she feels depressed and is often somnolent. She asks for a new, stronger sedative. If we analyze the short doctor-patient conversation, we observe that the patient is unsatisfied with her sleep hygiene, with the prescribed medicine and even the medical locum. The experienced family physician asks a series of focused questions, and in the second minute of this conversation the patient admits the fact, which the doctor has already suspected: as a consequence of the 15-year-long medication intake 'ritual', she has been taking the pill containing midazolam in the morning." [1]

It is not widely known that if a product is unavailable in a certain pharmacy due to country-wide stockout, then probably none of the other pharmacies received supplies. Informing the patient about the expected delivery date or offering the possibility to immediately substitute the requested medication with another one containing the same active substance, can often be a quick solution to the patient's problem. Questions by the pharmacist

aimed to discover whether the information was well interpreted, or summarizing statements, repetitions are important, as the patients must process and understand a vast amount of information. *“Medicine X has the same active substance as the previously mentioned Y. From now on you must take the antihypertensive medicine called Y.”* Asking clarifying questions is vital in both the communication with patients with a rich active vocabulary and those who are less educated mother tongue speakers. Our experience is that the question *“Are you familiar with the directions for taking the medicine?”* elicits an automatic *“Yes, thank you.”* answer, while the patient easily forgets the recent message, that from that moment on a medicine with a different name and active substance must be taken.

Nasal sprays vs drops – different, but fixed terminology

It often occurs in both the family physician’s practice and in pharmacy environment, that although most of the patients have nasal spray in mind (often showing the gesture of pumping the spray in the nasal passage), they consistently speak about nasal drops, and when they receive the product, they are unsatisfied, because they did not get what they wanted. If the professional asks *“Do you mean nasal drops or spray?”* when prescribing the medicine or when dispensing it in the pharmacy, the patient has a bigger chance to get the appropriate and desired medication. In this example, the relevant Gricean maxim [9] is that of the quantity. The utterance should not be more informative than required, because emphasizing the pumping gesture triggers the recognition [10] of the patient and makes him/her correct the initial request immediately. Should the questions asked, or utterances made be irrelevant when having a clarifying discussion, the maxim of relevance is being violated. If the question is too long, the sentence structure is ambiguous, or it is not adequately articulated (the clauses are wrongly stressed, the sentences are complicated or made up of multiple structures) the maxim of manner is being violated.

A patient with hearing and speech impairment— Unlike the rest of the article, which has a summarizing form, this example is a case report

A 40-year-old man with hearing and speech impairment arrives to the pharmacy in on-call service time. He is accompanied by two school-aged children, who express with a greeting that they can

hear and communicate. The man shows the image of a prescription-only analgesic on his smartphone, further information being provided by the children. Their father suffers from toothache and he needs analgesic. Due to the intensifying pain the patient is indignant, rejects the pharmacist’s initiative to start written communication, he keeps looking at the children, he deliberately avoids eye contact with the pharmacist. It is a true professional challenge to present and explain the wide spectrum of OTC medicines that could replace the requested one to the children, this attempt further increases the anger of the man. According to the children, this is the only product suitable for their father, but he has no prescription. In this framework, the final solution would be to see the on-call family physician, but the patient is non-cooperative, rejects written communication attempts and finally leaves the pharmacy. An hour later he returns calm and cheerful, holding two prescriptions (in addition to the analgesic he has had antibiotics prescribed, which is targeted therapy, not only symptomatic treatment). His children transmit his gratitude and apologize for his earlier behavior. It is lucky to have relatives accompanying patients with hearing or speech impairment, but the screen of a smartphone or written communication on paper can also be solutions for alternative communication channels.

Conclusion

We looked at only a few cases and conversation samples, but we think we managed to highlight those focal points, which can often lead to errors in conversation and communication techniques. As the group of health care professionals is heterogeneous, we attempted to emphasize the universal communication related advice just like the linguistic and communication practices that can be applied to their work and practice.

The examples demonstrate that statements chosen according to the receiver’s linguistic background and cognitive skills play a key role in the process of understanding. As a receiver, it is important to identify the speaker’s intention, to process the message, to classify, evaluate and highlight the information, to draw conclusions quickly, thus promoting understanding. Below, we are quoting Grice’s conversational maxims [9] to complete the picture and to achieve the goal set in the paper, which is to facilitate the presentation and review of the rules of conversation, to keep this knowledge active, in order for the healthcare professionals to

communicate straightforwardly and clearly, in such a way that is understandable to the receiver, instead of making mistakes and being ambiguous.

Grice defines four maxims, that must be observed by the conversing parties during the interaction.

MAXIM OF QUANTITY: Make your contribution as informative as is required.

Do not make your contribution more informative than is required.

MAXIM OF QUALITY: Do not say what you believe to be false.

Do not say that for which you lack adequate evidence.

MAXIM OF RELEVANCE: Be relevant.

MAXIM OF MANNER: Avoid obscurity of expression, avoid ambiguity, be brief and orderly.

(Grice, 1997)

Conflict of interest

The authors declare that they have no conflict of interest.

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