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Oncologists and Breaking Bad News—From the Informed Patients' Point of View. The Evaluation of the SPIKES Protocol Implementation

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Abstract

The way that bad news is disclosed to a cancer patient has a crucial impact on physician-patient cooperation and trust. Consensus-based guidelines provide widely accepted tools for disclosing unfavorable information. In oncology, the most popular one is called the SPIKES protocol. A 17-question survey was administered to a group of 226 patients with cancer (mean age 59.6 years) in order to determine a level of SPIKES implementation during first cancer disclosure. In our assessment, the patients felt that the highest compliance with the SPIKES protocol was with Setting up (70.6%), Knowledge (72.8%), and Emotions (75.3%). The lowest was with the Perception (27.7%), Invitation (30.4%), and Strategy & Summary (56.9%) parts. There could be improvement with each aspect of the protocol, but especially in Perception, Invitation, and Strategy & Summary. The latter is really important and must be done better. Older patients felt the doctors' language was more comprehensible ($r = 0.17$; $p = 0.011$). Patients' satisfaction of their knowledge about the disease and follow-up, regarded as an endpoint, was insufficient. Privacy was important in improving results ($p < 0.01$). In practice, the SPIKES protocol is implemented in a satisfactory standard, but it can be improved in each area, especially in Perception, Invitation, and Summary. It is suggested that more training should be done in undergraduate and graduate medical education and the effectiveness of the disclosure continue to be evaluated and improved.

Keywords Cancer · Breaking bad news · Patient's education · Information · SPIKES protocol implementation

Introduction

Breaking bad news (BBN) is an inherent part of every physician's clinical practice. This issue especially concerns oncologists who systematically face the task of disclosing a cancer diagnosis, usually strongly life-influencing, especially in unfavorably prognosing cases. Such conversation is stressful for both sides [1, 2]. Performed improperly, it can lead to patient's emotional breakdown, loss of fighting spirit, and have a negative impact on compliance and further cooperation [1, 3]. The significance of unfavorable information strongly depends on the receiver's perception, expectations, personal experience, and psychosocial factors [1].

Although in the past the knowledge of disclosing bad news had not been systematized and widely taught [4, 5], recently, several recommendations have been published, which clearly describe this complex and sensitive skill [3, 6, 7]. One of the most popular and accepted worldwide, with a special application for cancer patients, is the SPIKES protocol published in 2000 [3]. The name is the acronym describing the consecutive steps of a conversation, each of which is necessary for proper and satisfactory communication. Starting with *S* (*Setting up*), which describes the process of preparing for the talk, through *P* (*Perception*), and *I* (*Invitation*)—the parts in which the physician determines the patient's perception of the situation and his readiness to receive the news and which precede the information breakout, described in the next component—*K* (*Knowledge*). Then *E* (*Emotions*) follows, being the proper way of responding to patient's emotions. Eventually, *S* (*Strategy & Summary*), a kind of endpoint, is a summary in order to determine whether the patient properly understands the situation and further treatment. If not, the conversation does not fulfill its aim entirely.

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Despite established recommendations, there is a lack of comprehensive review on how breaking bad news is handled in practice and how much it meets cancer patients' expectations. Research studies show the beneficial effects of the protocols on physicians' skills and their self-confidence in disclosing unfavorable information [8, 9]. On the other hand, the differences between recommended solutions and patient expectations have been published [10, 11]. In the research on SPIKES evaluation in Germany [12], the awareness of upcoming suffering and prognosed progression as well as exact comprehension of the disease were indicated by the patients as the most significant, giving the *Knowledge* part the highest importance.

The guidelines suggest patient-centered communication with their involvement in decision making. In the study conducted by Zwingmann et al. to validate this statement [13], such approach occurred to lessen an anxiety and increase the trust for an oncologist. A similar conclusion comes from the research by Mast et al. [14]. However, Seifart [12] discloses, that there are no universal rules. In their analysis, almost 23% of respondents did not want to be involved in the following oncologist's decisions.

Although crucial as a tool for proper patients' education, SPIKES implementation is still absent in the *curriculum* at our University. However, students interested in oncology are usually trained in this algorithm during some extra-curricular activities, i.e., Students Scientific Society.

Aim

The aim was to evaluate the SPIKES protocol implementation during the first disclosure of a malignant neoplasm diagnosis from the patients' point of view.

Materials and Methods

An anonymous survey was conducted among patients of the Regional Cancer Center with a diagnosis of malignant neoplasm. Two hundred and twenty-six questionnaires were collected (response rate was about 88%). Females accounted for 62.83% of the patients and 37.17% were males. Mean age was 59.6 years (SD = 12.65).

The questionnaire (Appendix) consisted of 17 questions concerning the consecutive components of the SPIKES protocol. Most of the aspects were rated on a dichotomic (0–1) scale, and some on an ordinal one. The patients were asked how the bad news had been delivered to them on the first cancer disclosure.

The first two questions concerned the patient's age and gender. Further, respectively, questions 3–7: *Setting up*; question 9: *Perception*; questions 8, 10: *Invitation*; questions 11–13: *Knowledge*; questions 14–16: *Emotions*; and question 17: *Strategy & Summary*.

The results were statistically analyzed (using chi-squared test, *U* Mann-Whitney test, Pearson's *r* correlation), and significance level was established at $\alpha = 5\%$.

The Subjective Interview Rate (SIR) was determined by summing up the points from the questions in which the respondents' answers totally depended on their perception, that is: 6, 7, 11–17 (when two possible responses were available the following rule was applied: if the particular component was implemented according to the guidelines—1 point, otherwise—0 point). Using the same principle, the percentage of main protocol's steps (SPIKES 1–6) realization was calculated (as the ratio of the sum of the points given by the respondents to the sum of the points possible to obtain).

Results

The percentage of answers to the questions is reported in Table 1.

An overall realization of the main protocol's components was also evaluated. The highest score was established for the *Emotions* and *Setting up* steps. The percentage is as follows: S–70.6%, P–27.7%, I–30.4%, K–72.8%, E–75.3%, Summary–56.9%.

A statistically significant connection was found between the patients' satisfaction with their knowledge and privacy of the interview (Fig. 1) ($p < 0.001$). A similar relationship occurred between comprehension of the language of the doctor and the degree of patients' satisfaction with their knowledge of the disease and follow-up (Fig. 2) ($p < 0.001$).

The correlation between patient age and understandability of the doctor's language was also shown ($r = 0.17$; $p = 0.011$). Those who were invited to a separate room were more likely to rate the amount of time spent as sufficient ($p = 0.0001$).

The subjective interview rate as well as the assessment of the dedicated time did not differ significantly depending on the sex and age of patients

Discussion

Presently, more and more attention and effort is being paid to teaching the skill of breaking bad news at the stage of medical studies and in the first years of work, with an individual training which is believed to be the best way to improve the skills already at an undergraduate level [15, 16]. Our study investigates whether from the patient's perspective this skill is being applied effectively. Our research in 226 patients on their first encounter with their diagnosis reveals that the SPIKES program is being applied effectively (S–70.6%, K–72.8%, E–75.3%); but even in those aspects which are being done well,

Table 1 The percentage of answers to each of the question

No.	Question	Results	
3.	Did the doctor invite you to a separate room for the interview?	Yes	No
		65.33%	34.67%
4.	Did the doctor ask, if you would like to have someone from your family with you?	Yes	No
		31.7%	68.3%
5.	Did the doctor sit down with you during the interview?	Yes	No
		73.33%	26.67%
6.	Did the doctor maintain eye contact?	Sufficiently	Insufficiently
		75.78%	24.22%
7.	How do you find the privacy, intimacy of the interview? (0–very bad; 10–very good)	Figure 1	
8.	Did the doctor ask, if you were ready for this talk?	Yes	No
		34.08%	65.92%
9.	Did the doctor ask, at the beginning of the conversation, how much you had actually known about your disease?	Yes	No
		27.68%	72.32%
10.	Did the doctor ask, before the talk, how much information you would like to be given?	Yes	No
		26.79%	73.21%
11.	Did the doctor try to prepare you mentally for bad news?	Yes	No
		36.49%	63.51%
12.	Did the doctor use understandable language? (0–incomprehensible; 10–very comprehensible)	Figure 2	
13.	In your opinion, how much time did the doctor dedicate to you?	Too little	Sufficient
		34.84%	65.16%
14.	Were you emotionally supported by the doctor?	Yes	No
		62.78%	37.22%
15.	If yes, how intensely?	Insufficiently	Optimally
		6.57%	93.43%
16.	Did you have a feeling, that the doctor understood you?	Yes	No
		76.68%	23.32%
17.	When the visit was completed, were you satisfied with your knowledge about the disease and its further management?	Yes	No
		56.95%	43.05%

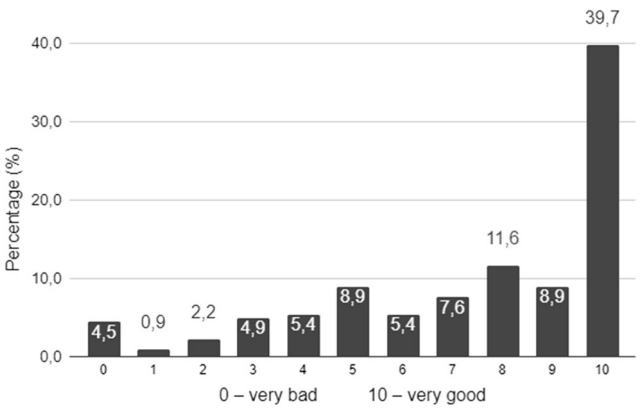

Fig. 1 The assessment of the interview privacy (question 7; values—percentage of answers)

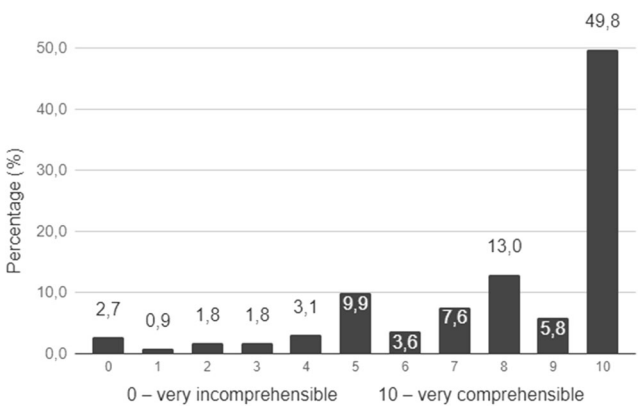

Fig. 2 The assessment of the doctor's language comprehension (question 12; values—percentage of answers)

there is room for improvement. Some parts are not done as well (P–27.7%, I–30.4%, and Summary–56.9%). Some think [12] that *Perception* and *Invitation* parts are not as crucial as the others, but most agree that the *Summary* part is very important.

Almost 35% of conversations did not take place in a separate room, which is essential to establish enough privacy. If such room is not available, the protocol also allows to draw curtains around the patient's bed, so physician's role is to provide as much privacy, as possible, using accessible methods. Standing during the talk also occurred too often, as it is indispensable to sit down in order to give a feeling that we are not in a rush and would like to dedicate as much time to each patient as they may need. In the 15th question, in which we asked the patients about the intensity of emotional support, the one of possible answers was "too much intensity," but no one chose this response. This fact may suggest, that actually the risk of overdoing sympathizing is low, although one needs to be aware of amount of physical contact, whose intensity is known to be strongly connected with sociocultural norms.

Most of the available studies are unanimous, that message content is the most important part of an interview for patients. It should be precise, comprehensive, and give realistic prognosis. However Brown et al. [17] described the main reason of patients' dissatisfaction as pessimistic or unsympathetic doctor's approach. These claims may lead to a conclusion, that one of the most difficult part of the process, but something that has a crucial impact on an outcome is to get a proper balance with empathic responses in order to give the patient hope but not unrealistic expectations and to be specific at the same time.

It is notably necessary to give more attention to the last step—*Strategy & Summary*—as the whole interview can not have been assessed well if a patient eventually does not understand his condition and follow-up. Our analysis shows that both more comprehensive language and proper setting of privacy have a positive impact on this aspect and doctors should always try to provide them on a highest possible level.

The fact, that older respondents assessed the doctor's language as more comprehensive may indicate, that physicians tend to wrongly assume, that they could use more professional terminology while talking to younger patients. Richter et al. [18] revealed that communication preferences did not generally differ significantly depending on patient's age and even younger ones expected more attention and time in answering their questions. Increased needs in this group were also revealed in the SPIKES evaluation in Germany [12].

Bousquet et al. [19] in a systematic review underlined the significance of an individual approach while talking to a patient. They describe physician-patient relationship as a dynamic one and suggest that current way of BBN training is too stereotyped and may not meet actual patients' requirements. Such a personalized approach, in our opinion, is not incompatible with established guidelines, but even may be regarded as their complement. It just emphasizes the importance of the steps *Perception* and *Invitation,* which allows a bearer to recognize patient's viewpoint and adjust an approach. As it has been already mentioned, these two parts in our research occurred being implemented in the least satisfactory way in the SPIKES process. Even if patients consider SPIKES 2 and 3 as second-class items [12], healthcare professionals should be aware how to use them properly, in order to lessen stress and make the most important part of the interview more personalized.

The SPIKES protocol was described in the USA, based on the American experts' opinion and experience. Cultural and ethnic differences in patients' attitude and expectations of BBN, as well as an organization of hospital work, should be taken into consideration [20]. That is why guidelines evaluations should be performed in different countries to determine, if the recommendations fit the reality of specific regions.

There are several limitations of our study. Respondents filled the questionnaires at various times after the first cancer disclosure, so their perception may have changed over this period. We did not analyze doctor's style of communication either, as we were only basing on patients' memories, often subjective ones, but we truly believe, that their viewpoint is the best feedback every physician can get.

Conclusions

In practice, the SPIKES protocol was done pretty well as perceived by patients, but all areas could be improved, especially in *Perception*, *Invitation*, and *Summary*. The latter is the most important. Privacy and comprehensible language are very important.

These skills should be systematically taught at each stage of medical education and evaluated by how patients perceive that they are being effectively implanted, always with a goal of continuing to improve.

Appendix

1. Age (at the moment of the cancer diagnosis): ……..
2. Sex: FEMALE / MALE

3. Did the doctor invite you to a separate room for the interview? YES / NO

4. Did the doctor ask, if you would like to have someone from your family with you YES / NO

5. Did the doctor sit down with you during the interview? YES / NO

6. Did the doctor maintain eye contact?

   INSUFFICIENTLY SUFFICIENTLY

7. How do you find the privacy, intimacy of the interview?

   0 1 2 3 4 5 6 7 8 9 10

   0- Very bad 10- Very good

8. Did the doctor ask, if you were ready for this talk? YES / NO

9. Did the doctor ask, at the beginning of the conversation, how much you had actually known about your disease? YES / NO

10. Did the doctor ask, before the talk, how much information you would like to be given? YES / NO

11. Did the doctor try to prepare you mentally for bad news? YES / NO

12. Did the doctor use understandable language?

    0 1 2 3 4 5 6 7 8 9 10

    0- very incomprehensible 10 – very comprehensible

13. In your opinion, how much time did the doctor dedicate to you?

    TOO LITTLE SUFFICIENT

14. Were you emotionally supported by the doctor? YES / NO

15. If yes, how intensely?

    INSUFFICIENTLY OPTIMALLY TOO MUCH

16. Did you have a feeling, that the doctor understood you? YES / NO

17. When the visit was completed, were you satisfied with your knowledge about the disease and its further management? YES / NO

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