

**Systematic Review**

**How to break bad news?: Systematic Review**

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**Abstract**

**Purpose:**

We conducted a systematic review of studies that focus on existing protocols for oncologists and other physicians who are in touch with cancer patients.

**Method:**

We searched all internationally published articles on the introduction of a protocol as the guideline. To this purpose, we did a thorough search of Pubmed and Cochrane Collaboration Library databases and reviewed all articles from 2010 to 2017.

**Results:**

We introduced 7 papers from 7 countries and evaluated their proposed protocols. A primary protocol called SPIKES had been discussed in most studies. This protocol emphasized the six steps of setting, perception, invitation, knowledge, empathy and summary.

**Conclusion:**

BBN is a balanced action that requires oncologists and other specialists to consistently adapt to its different criteria. Developing the ability to personalize and adapt to therapeutic treatment with respect to communications can be a major step forward in the training and exercises that physicians receive in connection to communication skills.

**Keywords:** Breaking bad news, Patient-Doctor relationship, SPIKES, Cancer, Oncology

**Introduction:**

Breaking bad news (BBN) to patients and their relatives is a complex and stressful task. This essential communication skill is required for all medical practitioners, especially oncologists. Therefore, all physicians and surgeons must acquire different set of skills during their career in order to be able to handle BBN situations.

It is while even more than half of doctors in developed countries have reported the lack of any formal education for patients with BBN [1].

In Turkey and Iran, medical students do not receive any formal education in relation to BBN and communication skills, and it may increase the physician's stress and anxiety in these situations and lead to the discomfort to patients [2,3].

On the other hand, patients also report that the bad news is often broken to them promptly, and the adoption of a direct approach to the BBN without prior notices highly prevalent [4, 5]. As we know,

starting and maintaining a good relationship is essential for physicians [6] because a weak and inappropriate relationship may bring about adverse consequences for the patient and the doctor. In cancer patients, this may be a function of poor clinical and psychological outcomes, including weak pain control, dissatisfaction with non-involvement in decision making and more confusion than prognosis [7,8]. Adherence to the treatment, information retrieval and quality of life are all improved when a good relationship is established [9,10]. On the other hand, in the absence of a strenuous relationship, the discontent and stress of practitioners will be mitigated and they will face less psychological complications [11, 12]. Also, a reduction in miscommunication will lower the chance of medical faults and related complications [13].

Therefore, it is necessary to define a specific protocol in relation to BBN as the first long-term, formal, and important doctor-patient relationship

**References**

1. Jameel A, Noor SM, Ayub S. Survey on perceptions and skills amongst postgraduate residents regarding breaking bad news at teaching hospitals in Peshawar, Pakistan. *J Pak Med Assoc.* 2012;62(6):585-9.
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, which can be regarded as the core of training in medical curriculum.

We did a systematic review of studies to introduce existing protocols in BBN and its effectiveness..

### Method:

### Selection of studies:

The title and abstracts of all articles and citations were assessed by two independent reviewers and related articles were screened out. All disputes were resolved by discussion.

### Inclusion criteria:

All articles about the introduction of a BBN protocol for cancer patients published between 2010 and 2017 in English were included in the

study. The BBN was assumed to include a diagnosis, relapse, palliative care transition, and end-of-life transition.

The abstracts presented in the congresses, which were published in the journal handbooks, but the full text was not published in any journal, were also incorporated in the study. All studies in which the study population involved non-cancer patients, children suffering from this disease, or doctors associated with other groups of patients were excluded. Table 1 show the inclusion and exclusion criteria of the study.

### Search sources and strategies:

We searched all articles in English published in the pubmed databases, Cochrane collaborative library

**Table1.**Inclusion and exclusion criteria

### References

4. Hanratty B, Lowson E, Holmes L, Grande G, Jacoby A, Payne Sh, et al. Breaking bad news sensitively: what is important to patients in their last year of life? *BMJ Supportive & Palliative Care*. 2012; 2 (1):24-28.
5. Fujimori M, Akechi T, Uchitomi Y. Factors associated with patient preferences for communication of bad news. *Palliat Support Care*. 2017;15(3):328-335.
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from 2010 to 2017. The references of articles were reviewed manually. The search strategy is shown in flow chart (Figure 1).

### Data extraction

In the present study, BBN was considered as communicating a message including diagnosis, relapse, palliative care transition and end-of-life transition to patients with cancer. Any study that provided a possible respond to the main research question, i.e. the introduction of the protocol for BBN and its effectiveness, was included in the study.

In other studies, the answer to one of the three following questions was investigated.

1. What are the patient's preferences for receiving bad news?
2. How doctors are trained for competency in breaking bad news and what are BBN protocols?
3. Do doctors receive any BBN training?

### Results

232 studies were evaluated out of which only 7 including 2 review studies, 1 qualitative study and

### References

7. Stewart MA. Effective physician-patient communication and health outcomes: a review. *CMAJ*. 1995;152(9):1423–33.
8. Haskard-Zolnieriek, KB, DiMetteo MR. Physician communication and patient adherence to treatment: a meta-analysis. *Med Care*. 2009; 47(8):826–834.

4 research studies were incorporated in the study, and the rest were reported as case studies.

### Characteristics of studies and subjects:

The details of 7 studies that directly responded to the main research question, i.e. the introduction of the protocol for the BBN and its effectiveness, are shown in Table 2.

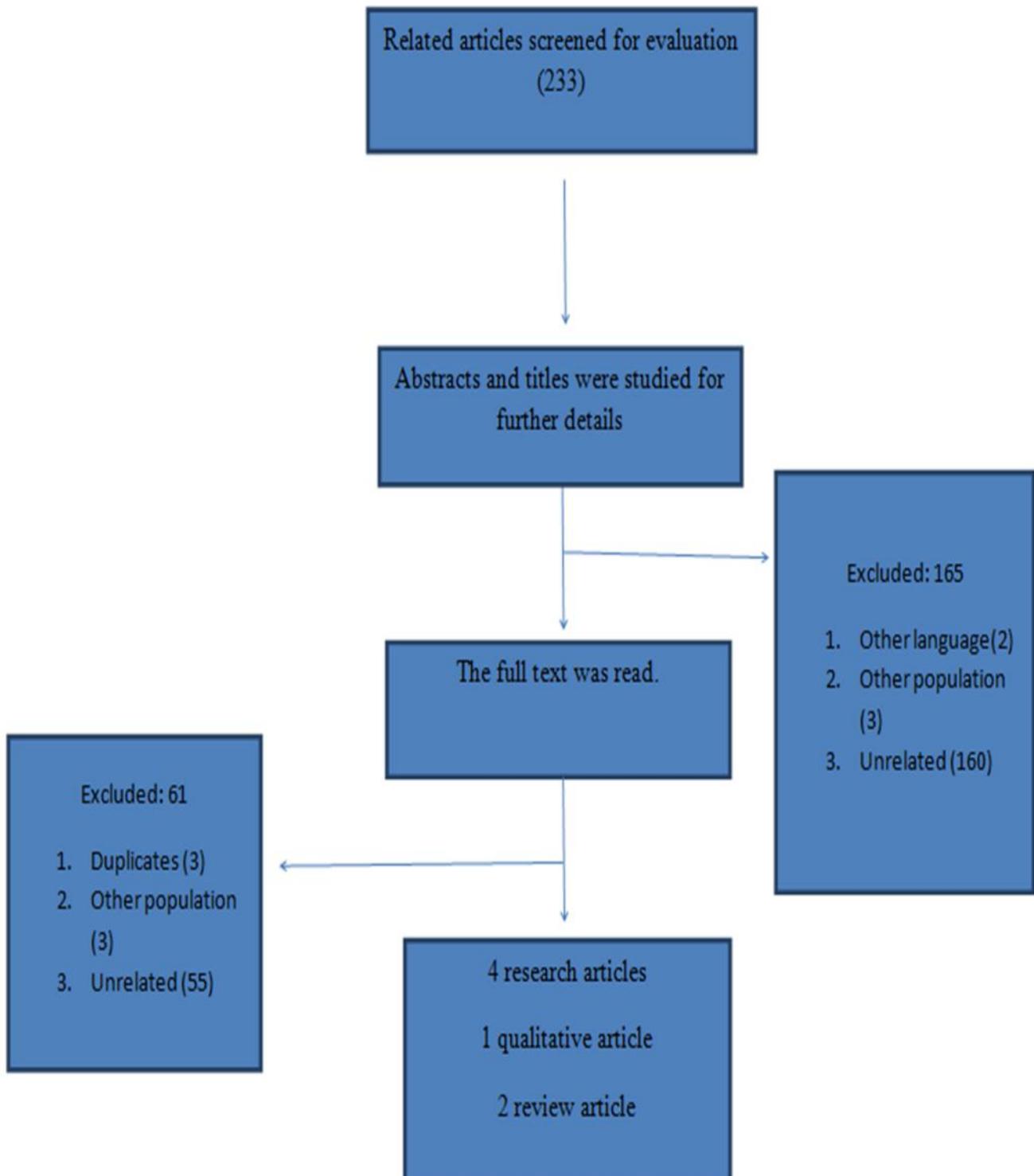
### Main review questions

*1 What are the patient preferences in connection with BBN?*

Patient preferences should be considered in BBN situation. Since patient information is part of patient privacy, it should be considered as a central principle in medicine. It is because patients believe that 1. Private information related to diagnosis and stages of the disease is exclusive to the patient. 2. They must have control over the flow of information.

3. They have to decide who to share this information with. 4. How do those receiving this information observe the confidentiality and privacy principles? [20]

**Fig. 1:** Search strategy



early stages due to enhanced screening facilities, consistent with the results of similar studies on heightened awareness and availability of methods colorectal cancer worldwide [5,8,10,11].

[8-11].

The most common histopathological pattern of colorectal carcinoma was adenocarcinoma (well, moderate and undifferentiated). Among these, moderately differentiated adenocarcinoma was the most common (53.52%), which is

Most people believe that a patient should not be told about having a cancer, but the study of Zekri in 2016 revealed that contrary to the expectation of relatives, patients usually desire to receive bad news, with a survey of general practitioners also confirming this demand of patients. (21)

**Table 2:** Characteristics of included studies

Study	Type of study	Country	Results
Hanratty, 2012 (4)	Qualitative	UK	There are three main principals in BBN situations: 1. Preparation 2. discussing the situation 3. reviewing the situation
Pang, 2015 (14)	Interventional	China	CST-based SPIKES training can be highly useful and effective.
Setubal, 2017 (15)	RCT	Brazil	Teaching SPIKES in simulated conditions can promote the knowledge, skills and ability of physicians.
Seifart, 2014 (16)	Research article	Germany	SPIKES was introduced as the most common protocol in the BBN situation.
Stiefel, 2010 (17)	Review article	Switzerland	The results of the study emphasized three components as the first step: Setting, goals and participants of CST
Dunning, 2015 (18)	Case study	UK	The concurrence of PAPM training and SPIKES can yield better clinical outcomes.
Narayanan, 2010 (19)	Review article	India	The BREAKS protocol is a systematic and easy strategy for BBN the adoption of which offers satisfactory health outcomes.

Approximately 58% of patients were against BBN in the presence of families, and others (63.5%) stated that a doctor should seek the patient permission before breaking bad news with 58% of people preferring a patient-oriented communication in doctor-patient relationship [22].

There are many controversies about whether anticipation to receive bad news is more disturbing that actually knowing the truth. In this regard, the study of Sweeny Yan suggested that the best strategy should be adopted in accordance with the patient personality [23]. However, the results of a 2014 study revealed that many other important issues are often not taken into account, let alone the regard for patient's tolerance for anxiety under different circumstances. In this study, few patients were satisfied with BBN protocol and there was a significant difference between patient preferences and existing protocols [16].

The most important patient preferences related to BBN were as follows:

- Transparency and clarity about providing information on the progress and pain of the disease
- Discussing the details of the patient's conditions and disease [16]

For more than a decade, the patriarchal attitude of health care have provided models that stressed the empowerment and independence of patients and their participation in decision making [21, 24, 25]. This shift would be highly valuable provided that it is supported by existing guidelines and recommendations.

Therefore, it should not be neglected that flexibility is a key in BBN situation and patient's conditions and preferences should be taken into account.

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2 How do physicians are trained to gain emotions) competency in breaking bad news and what are the protocols for BBN?

Several protocols have been proposed to help guide doctors through this challenging process. [26, 19, 27] In this context, the SPIKES protocol, developed by Walter and Buckman, has been widely adopted by oncologists [28.29].

This strategy consists of six steps [16]:

1. Setting (arranges for privacy, sit down, avoid interruption)
2. Perception (inquire how much the patient already knows)
3. Invitation (discuss how much a patient wants to know)
4. Knowledge (avoid terminology, allow moments of silence)
5. Empathy (acknowledge and validate patient

6. Summary (confirm understanding, address patient-specific goals)

This guide line was proposed for BBN in the United States and it has been utilized as a formal instruction in the United States [30] and countries like Germany [31].

In a case study by Dunning, a resident was initially trained as a practitioner in Applied Practice Model (PAPM) and then received training in SPIKES steps. The results indicated that simultaneous presentation of these trainings yielded desirable results in clinical communication behaviors in BBN situations [18].

As noted in a commentary, SPIKES, as a flexible guideline, can help physicians focus on the demands of patients and their family in a personalized and patient-centered manner [32].

The study of Narayanan recommends the use of

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of protocol-BREAKS (background, rapport, Astudy by Hanratty suggests that three key principles in the BBN situations should be explore, announce, kindle, summarize) [19]. considered. These three principles are:

1. Background (have deep knowledge of the patient's problem)
2. Report (Building rapport is fundamental to continuous professional relations.)
3. Explore (Whenever trying to break the bad news)
4. Announce (A warning shot is desirable, so that the news will not explode like a bomb)
5. Kindle (People listen to their diagnosis differently)
6. Summarize (The physician has to summarize the session and the concerns expressed by the patient during the session)

The use of this protocol can improve treatment outcomes.

1. Preparation: It involves reflecting on the situation and identifying available strategies for dealing with.
2. Discussing the situation: It is a communication processes with patient, which quires both general and specialized communication skills.
3. Reviewing the situation: It allows the individual to decide what things are good or bad under these circumstances [1].

In general, there appears to be a linear process in all methods, which mainly involve identical steps, and basically involves three steps:

- 1- Preparing for clarification (assessment of the patient in terms of his knowledge and preferences)
2. Transparency (breaking news and making use

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of materials such as pictures and pamphlets, and ensuring the correct perception of the patient)

3- Follow up (answering the patient's questions, reacting to his feelings, introducing the next step of treatment, finishing the discussion)

### 3 Do trainers receive BBN training?

A large body of studies in countries, such as UK, US, emphasizes systematic educational needs of medical students and residents in BBN situations [1, 33]. In the past decade, education and assessment of communication skills including BBN constituted an integral part of students' training in many countries [34-35]. The status of BBN education in many countries, and especially developed countries, is far from the desirable [1]. Hopefully, many studies have shown that the art of breaking bad news can be taught and learned, and this training can fill the gap between knowledge of residents and doctors [36-37].

Several studies on BBN training and analysis of various training methods have employed a sequence of events similar to the six-step SPIKES. (41-38) A 2010 study by Stiefel underlines the various dimensions of communication skills training (CST) in oncology, stating that continuous and direct evaluation should be undertaken to achieve desired effectiveness. Trainings should be flexible and educational packages need to be tailored to the cultural and organizational conditions and the patient's context [17]. Growing attention has been paid to CST-based SPIKES training, which can be largely significant in this regard [14].

The study of Setubal suggested that teaching SPIKES to residents in simulated conditions yielded substantial results. It boosted residents' knowledge (97.3%), their perceptions of BBN (94.6%), ability to use (81.1%), and correct timing (94.6%). Also, 100% of the residents said SPIKES training could be helpful in many areas [15].

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Unger's study introduced an educational program that could promote the knowledge, attitudes and skills of residents in terms of patient's sensitivity. This program introduces 5 steps with respect to patient conditions [39]:

**Theoretical knowledge:** A cognitive model for dealing with crises and stresses.

**Skills:** Communication modalities and basic therapeutic interventions.

**Attitudes:** Adjusting people's attitudes and discussing their experiences.

Self-awareness: Comparison with the doctor's personal emotions (mindfulness)

5. Understanding the cultural variables between patients and the consequences of confronting them.

### Study Limitations:

There are potential limitations of this study, including a lack of special protocol according to different cultures and there were few studies that it describes special steps, clearly.

## Conclusion

It is clear that designing a BBN protocol is only a small step in raising effectiveness of a program. To achieve this goal, many prerequisites including training communication and professional skills should be met. [5] Despite the growing emphasis on the sensitivity of the BBN, it is not always implemented thoughtfully. Some small modifications in practice can improve patient experiences. Further preparation, a proper time for observation and caution in disclosure for each new patient are of paramount importance.

The adaptation of doctors with diverse factors could be especially helpful and expanding the ability to personalize and adapt to therapeutic treatment in the field of communication can be a major step forward in the training exercises that doctors received in connection to communication skills.

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