ADDIS ABABA UNIVERSITY
COLLEGE OF HEALTH SCIENCES
SCHOOL OF NURSING AND MIDWIFERY

ASSESSMENT OF BREAKING BAD NEWS PRACTICE AND BARRIERS AMONG NURSES AND PHYSICIANWORKING IN ONCOLOGY UNIT AT TIKUR ANBESSA SPECIALIZED HOSPITAL AND ST, PAUL MILLINUM MEDICAL COLLEGE, ADDIS ABABA, ETHIOPIA.

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A THESIS TO BE SUBMITTED TO ADDISABABA UNIVERSITY, COLLEGE OFHEALTH SCIENCES, SCHOOL OF NURSING AND MIDWIFERY FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR DEGREE OF MASTERS OF SCIENCE IN ONCOLOGY NURSING.

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My Special thanksalso goes to study participants for giving me their precious time on sharing the information they have, with the hope that cancer management will improve in the future.

ACRONYMS AND ABBREVIATIONS

AA Addis Ababa

BBN Breaking Bad News

COPD chronic obstructive pulmonary disease

IRB Institutional Review Board

ST.PMCH Saint Paul Millennium Medical Collage Hospital

SPIKES Setting, Perception, Invitation, Knowledge, Empathy, Strategy and Summary

TASH Tikur Anbessa Specialized Hospital

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Abstract

Background: Breaking bad news is a process of delivering news, which may negatively affect a patient's and/or family's view of the future. Globally breaking bad news is distressing to patients and families and is often uncomfortable for nurses or physicians on delivering it. In addition to the psychological impact of the news, breaking bad news also insensitively can cause patients additional distress and anecdotal accounts abound of the impact in relation to poor delivery.

Objectives: The aim of this study is to assess breaking bad news practice its barriers and associated factors among Physicians and nurses by using SPIKES protocol working at Tikur Anbessa specialized Hospital and St, Paul Millennium medical college oncology units, Addis Ababa, 2018.

Methods and analysis: Mixed approach quantitative and qualitative cross-sectional study design was conductedamong physicians and nurses working in oncology units. Data was cleaned and entered using Epi data version 3.1 and analyzed using statically package for social sciences (SPSS), version 20. Descriptive statistics including frequency, proportions, mean and standard deviation was used to describe participant's characteristics. Bivariate and multivariate analysis was carried out to see statistical association between independent and the outcome variables. Qualitative data was triangulated and presented in the form of narration.

Result: The mean age of participants was 29.5 years (SD ± 6.6). Majority 128 (63.1%) were orthodox Christian followers and 148 (72.9%) were degree holders. Of all 82.85% participants were not attended any training related to breaking bad news practice, only 47.3% of the participants ever delivered bad news of whom, 7.9% of them used SPIKES protocol. Factors associated with breaking bad news practice include; marital status and training, **{AOR=7.5; 95% CI (1.16-49.2)} p= 0.034, {AOR=12.5; 95% CI (1.7-27.6)p= 0.011}** respectively. Lack of awareness of SPIKES protocol, time constraint, lack of separate room, work overload were the barriers identified by the in-depth interview.

Conclusion and Recommendation: In this study high prevalence of physicians, and nurses not used the SPIKES protocol for delivering breaking bad news. Marital status and having training **are significantly associated with breaking bad news practice using SPIKES protocol.** Lack of awareness of SPIKES protocol, time constraint, lack of separate room, work overload were barriers for reduced practice of **breaking bad news practice using SPIKES protocol. Therefore, training for care providers, facility improvement, and development of standard guidelines are critically needed as that help to improve recommended breaking bad news practice at the mean time improve** patient's quality of life.

Key words: breaking bad news, SPIKES protocol practice, barriers to use SPIKES.

Introduction

1.1 Background

Cancer is one of the life threatening illnesses that has physical, social, and psycho-spiritual symptoms and sings during its course of progression and treatment that could cause suffering of patients(1) Cancer is among the leading causes of morbidity and mortality worldwide, with approximately 14 million new cases and 8.2 million cancer related death in 2012. The number of new cases is expected to rise by about 70% over the next 2 decades. In Africa, cancer has become an emerging public health issue, with estimates of 715,000 new cases and 542,000 cancer related deaths. In Ethiopia, annual incidence and mortality of all cancer types were 517,000 and 416,000 respectively. The 5 most commonly diagnosed cancer cases were breast, colorectal, lung, cervix and stomach cancer(2).

Bad news often pertains to a situation where there is a feeling of no hope, a threat to a person's mental or physical wellbeing, a risk of upsetting an established lifestyle or where a message is given which conveys to individual fewer choices in his or her life. The moment is stressful for patients, especially if the clinician is inexperienced(3).

Breaking bad news is a process of delivering news, which may negatively affect a patient's view of the future. Especially when delivered to patients with cancer diagnosis is not an easy task. It is an emotive subject for both health professionals and patients(3). However, disclosure of bad news is inevitable in medical institutions and is a vital part of the duties of doctors and other healthcare professionals. Breaking bad news needs skills and strategies where a physician should be able to disclose bad news to patient and family while addressing their concerns accordingly (4).

Cancer patients want to be well-informed and updated about the progress of their case and prefer to have disclosures with their doctor in a private setting. However, there are times that the cancer patients request some of their relatives to be with them during discussions with their oncologists. It is imperative to inform these patients personally the details of their condition in the manner that they are most comfortable. Thus, their convenience and comfort in disclosing bad news are of the utmost priority(5).

In summary, since the prevalence rate of cancer cases is increasing every year, delivering the bad news has become more pertinent and also essential role for physicians and nurses to deliver the

news in proper way. Therefore, the provision of breaking bad news to anyone who needs it requires expertise, experience and compassion.

1.2 Statement of the problem

Communication between physicians, nurses and patients is a fundamental aspect of cancer care, especially when bad news is being communicated. Breaking bad news to patients and their relatives is a complex skill as, in addition to the verbal component, it also requires the ability to recognize and respond to the patients' emotions, dealing with the stress that the bad news creates and yet still being able to involve the patient in any decisions, and maintaining hope where there may be little.

Though health care professionals must relay adverse medical information to patients, it is particularly common in the oncology setting where news regarding a life-threatening diagnosis, treatment failure, and disease recurrence are frequently given to patients. Because a diagnosis of cancer is associated with a number of potentially unfavorable events, including debilitating and/or disfiguring treatment, pain, loss of function, and death, these discussions may be particularly stressful and difficult for patients to understand. As a result, the type of communication best suited to this setting may differ from other types of bad news discussions(5).

Receiving bad news is a stressful for the patients and their relatives and else, as many times; it virtually alters his or her future(6). Similarly delivering bad news is a stressful task for health care providers(7).The manner in which the health care providers communicate the bad news concerning cancer vastly affects the degree of patient's distress in response to the news (8). If bad news is communicated badly it can cause confusion, long-lasting distress, and resentment. Breaking bad news communication skill is crucial in the medical profession, where as formal training is rarely available(8). Patients and relatives were developing heartbreaking conditions while receiving bad news without skillful delivery (14). It is unforgivable if done without judgment, understanding or sympathy(9).

Nurses are constantly communicating with patients spending most of their time. This communication becomes more critical especially when it is with cancer cases. However, nurses may experience a high rate of burnout and compassion caused fatigue from delivery of breaking bad news. Thorough preparation for intense, full-disclosure discussions may negatively affect job outcomes, performance and efficiency (6). Symptoms of stress, such as increased heart rate and perspiration, can occur while breaking bad news and the stress response can be sustained (7). The burden may reduce the practice of breaking bad news provision to their patient and relatives.

According to research conducted in Ethiopia to assess communication barriers, language barriers, inadequate time to deliver all information to patients and lack of privacy examining room was reported as some of the challenges during the communication between cancer patients and physicians. And some of the physicians prefer family care giver to provide information concerning the patient(14)

A trusting relationship between the nurse and the patient is extremely important for effective communication (4).Breaking bad news discussions may have to occur frequently in an effort to help patients and family members understand the aspects of treatment. Nurses and physicians must be aware of the complexities of communication that can help families cope with the difficult situation or decision. Breaking bad news is generally not a onetime event, particularly for nurses and physicians it requires working with families to process the difficult information and provide clarification as needed (5).

Breaking bad news needs a special well qualified skillful professional with qualities of verbal and non-verbal skills. If done well; it can assist understanding, acceptance, and adjustment. If breaking bad news is done well, may improve patient's quality of life and feel somewhat less hopelessness (8). Health care providers who are skilled in communicating with their patients can have a significant positive impact on their patients' well-being(9). However, health care providers often fail to recognize the patient's emotional trauma that can be caused related to receiving "bad news" diagnosis (10).The task of breaking bad news can be improved by understanding the process involved and approaching it as a stepwise procedure, applying well-established principles of communication and counseling. Some studies frequently recommend SPIKES protocols to deliver breaking bad news. However, in Ethiopia, there is no literature about breaking bad news even using SPIKES protocol, either among nurses or physicians. Therefore, the main purpose of this study was intending to examine breaking bad news practice and the barriers among Physicians and nurses working in oncology units.

1.3 Significance of the study

Communication protocols are intended to minimize stress related to breaking bad news, facilitate the development and maintain a good relationship between health professionals and patients. The communication skill of oncology clinician is a basic facilitation of cancer care to the patient during the process of delivering medical information. The life of cancer patients can be shortened not only by the acts, but also by the words or the manner of a physician and nurses. Therefore this study aimed to assess the experience and barrier related to delivering bad news for cancer patients among physicians and nurses'.

The results of the study will be helpful to make institutions service evidence based; the institutions can use this research finding as an input to improve thequality service delivery. It can also improve the everyday breaking bad news practice of nurses and physicians working in each unit that provide care for cancer patients by addressing the gap by in service training and at the mean time patients will be benefited from the result while healthcare professionals attempt to address the SPIKES protocol practice in general.

In addition, since there is no study about breaking bad news in Ethiopia, this study tends to help nurses and physicians to be aware their practice and make effort to improve by addressing the gaps in the way, they break bad news to cancer patients and relatives.

In addition, this study can act as stepping stone for other researchers to conduct a research on the issue and it fills a knowledge gap in the area of breaking bad news by using of SPIKES protocol.

2. Literature review

2.1 Introduction

Breaking bad news is a serious and very challenging task for physicians and may become very stressful for all parties concerned, including doctors and patients. However, a structured procedure for disclosure with proper practice has been associated with positive and meaningful outcome. Communication and interpersonal relation competences are a prerequisite to elicit information in order to facilitate accurate diagnosis, counsel, give therapeutic instructions, and establish empathic relationships with patients(9, 15).One of the greatest challenges in the communication process is maintaining hope when bad news is revealed (16).Communication between health professionals and patient can be problematic and the difficulties can be more profound when a diagnosis of cancer is involved(17)

Effective communication between a health care provider and patient is an important contributor for patient satisfaction, treatment, and good health outcomes. Patients, who are aware of their medical condition, understand the purpose of offered treatment, and are assured that the provider is concerned about their well-being report greater satisfaction with the services received and act in accordance with the prescribed treatment regimen. A health care provider's communication skills have been found to be associated with patient satisfaction, medication compliance, and appointment keeping(18).

Clear communication provides the clinician with better information needed for accurate diagnosis and appropriate treatment planning. At the same time effective interaction between the health care professional and the patient supports the patient and gives comfort in terms of other possible conditions he or she has, or might develop. As a result, the knowledge of what message and in what way and how much of that message to communicate to the patient are important skills for all professionals in health care setting(18).

Cancer patients, either in treatment or survivors, compose a vulnerable population with increased information needs. They depend heavily on their clinicians in regard to coping with physical, emotional, and social burdens, which affect their quality of life (19)

As quantitative research conducted in Greek shows, residents delivered bad news less frequently than specialists did. 81.82% residents delivered bad news less than five times a month and 65.38% specialists five to ten times a month. In relation to training, 64.41% doctors had not had specific

training in breaking bad news. Twenty one doctors had specific training during undergraduate or postgraduate studies and through discussions and interviews with more experienced colleagues. 79.66% doctors had a consistent plan for breaking bad news and 76.27% doctors answered that they do not deliver bad news the same way to all patients. 96.61% doctors choose a quiet place and 89.83% allocate ample time without any interruptions. Among all the respondent only 38.98% doctors sit close to patients and 57.63% of the doctors allow physical contact with them and 89.83% doctors use simple words, ensure patient understanding and do not rush through the news (20).

After the provider initially relays information about the patient's diagnosis or disease progression, nurses are usually the members of the healthcare team who provide ongoing support to the patient and family members. Understanding the efficiency of the breaking bad news conversation, the specific concerns of the patient and family, and how the information is received are important in providing continued support and education. Patients and families often turn to the nurse for clarification and additional information or to redeliver the bad news. When breaking bad news is ineffective or insensitive, the oncology nurse can provide support for any emotional trauma that may occur (3).

Nurse- patient relationship is the relationship between a nurse and a patient where the nurse cares for the patient and it often involves addressing patient's personal information(21). The qualitative study conducted in Brazil on the role of Health Care Professionals in Breaking Bad News Suggested that nurse's communication, when giving bad news, should focus on showing empathy and compassion. It should bring information according to the patient's or family's needs. Information that is given should be clear and reliable, the amount of information that the patient requires should be asked from themselves(22).

According to the qualitative study done in the Finland, shows nurses participation in breaking bad news appears to be focusing on before the information has been given to the patient as preparing them and the environment and after the patient has received the news as supporting and helping with coming terms with the information(23).

Education and training on breaking bad news and the follow-up support required enhancing communication skills and cultivate the ability to be effective when having a serious dialogue (24). Simulation and standardized patient experiences provide environments to refine life-changing, delicate, and emotional discussions. Communication curriculum that includes models for breaking bad news is central to providing care for patients and families. The Breaking Bad News Foundation is focused on training compassionate communication when delivering traumatic diagnostic and prognostic information (25)

2.2 Patient perspectives in breaking bad news

Patients repeatedly identify good doctor-patient communication as an essential element in quality healthcare provision. A survey among 440 patients with advanced cancer, chronic obstructive pulmonary disease (COPD), and heart disease showed that more than 98% of these patients cited open and honest communication with their physician as very or extremely important to their care(26).A survey of 232 outpatients with cancer found that 99% of patients cited communication skills as a very or moderately important aspect of care(27).A study found that many patients believed that communication with their physician could influence important cancer outcomes, most especially their survival, by virtue of its effect on decision-making, immune functioning, and attitude as well as their emotional distress, sense of control, and feelings of hope(27)

Cancer patients want to be well-informed and updated about the progress of their case and prefer to have disclosures with their doctor in a private setting. However, there are times that the cancer patients request some of their relatives to be with them during discussions with their oncologists. It is imperative to inform these patients personally the details of their condition in the manner that they are most comfortable. Their convenience and comfort in disclosing bad news are of the utmost priority(26).

There have also been studies which shows patients prefer to know directly if they have cancer, get a realistic estimate of survival as well as the available therapies that they could avail and their corresponding benefits and adverse effects. Receiving accurate information regarding their case is what most of the patients prefer in order for them to generate specific decisions that may have a great impact on their quality of life and plans(28).

As the study done in Ethiopia shows, most of the patients and family caregiver participants describe the way they obtained bad news from oncology doctors as heart breaking. For example they told to

family care giver by saying that your daughter has cancer and it is expensive to get treatment and I don’t think you can afford it. The patients prefer don’t under estimated by physician when breaking bad news(14).

2.3Health professional's perspectives in breaking bad news

Many physicians report delivering bad news to be a difficult and stressful experience, even for those who do it frequently. In a survey of 700 members of the American Society of Clinical Oncology, over 75% of clinicians reported breaking bad news to a patient at least 5 times in a typical month, with 45% doing so 10 or more times per month. Despite this frequency, 39% rated their ability to deliver 13 bad news as only fair, and 8% considered it poor. Fifty-eight percent of all clinicians in this survey identified "being honest but not taking away hope" to be the most difficult aspect of breaking bad news(29)**.**

As the research conducted in Canada revealed, among the most difficult part during discussing the bad news Telling patient about recurrence, talking about end of active treatment and beginning palliative treatment, discussing end-of-life issues were mentioned frequently and involving family/friends of patient (10)

In Italy, there was a survey about disclosure practices and cultural narratives, the results revealed that only 44% of the responding physicians preferredto inform the patients of the cancer diagnosis and their respective prognosis if the patients themselves wanted to; even if, the family members opposed (30).

A qualitative study explored that Nurses may experience a high rate of burnout and compassion related fatigue, from breaking bad news, which may have distressing effects on professional performance and general health. Thorough preparation for intense, full-disclosure discussions may prevent the negative outcomes that may occur on job performance and efficiency (11).

According to the qualitative research conducted on the nurses' perspectives on breaking bad news in Iran shows, Nurses emphasized the role of effective communication by saying environment should be prepared and the patient's companion should not be present when nurses deliver the bad news and believed that the exchange of information is essential in delivering bad news(31).

In India quantitative study on oncology cases, 51 doctors (86.%) choose patients'relatives as first recipients of bad news. 46 doctors (78.%) allow relatives to determine whether patients are informed fully about the disease. 33 doctors (56%) answered that they do not try to convince patients' relatives that the patient needs to know everything about the disease. 21 doctors (35.6%) answered that the diagnosis is the most difficult part in the discussion with oncology patients and their relatives. 26 doctors (44.%) found that the most difficult task is to discuss the prognosis, 3

doctors (5.8%) about remission and 9 (15.2%) discussing the end of active treatment and start of palliative care (20).

As the study conducted exploratory study on the role of communication among physicians in cancer consultations shows, Work overload was reported as one of the reason for communication problems. The challenge they have here is that there are so many patients so they are not able to exhaustively communicate and tell them all about their disease and answer their questions (14).

2.4 Breaking bad news related outcome

The research reports that communicating bad news creates an everlasting repercussion on the patients' and family caregivers' as a result of inability of oncologists to successfully break bad news to patients and their family caregivers due to lack of communication skills(32).Bad news causes higher levels of emotional disturbance and reduces the capacity of patients and families both to absorb and to retain information(6)

A certain amount of anxiety is normal in response to a diagnosis of cancer, yet many patients experience more severe, clinically significant psychological distress that can interfere with their quality of life and ability to manage and cope with the disease(33). For instance, a large study of approximately 4,500 patients with newly diagnosed cancer found that 18% had clinically significant levels of depression and 24% had clinically significant levels of anxiety(34).

A smaller study of women with ovarian cancer reported similar findings, with 35% of patients evidencing mild to moderate depressive symptoms and 20% showing 6 moderate to severe depression(35).

In the qualitative study, patients reporting good communication with their doctors are more likely to be satisfied with their care, and especially to share pertinent information for accurate diagnosis of their problems, follow advice, and adhere to the prescribed treatment(36).Other studies have reported that physicians who give bad news often (e.g., oncologists, colorectal surgeons) tend to experience high levels of burnout, and physicians who perceived their training in communication skills to be inadequate were more likely to report high levels of stress and burnout(37)

2.5 Barriers related to breaking bad news

The majority of participants reported that they did not have enough time for difficult discussions with patients. They also reported that it was stressful to deal with their patients' families and respond to their patients' emotions, to be honest without depressing their patients, and to handle their own negative feelings(38).

According to qualitative study conducted in Uganda when physician communicate with patient about their cancer case they do not ask any question they don't want to know, they avoid asking questions that maybe related to prognosis (14).

1.6 Recommended way of breaking bad news

Consequences of improper delivery can result in the loss of a patient's trust. A patient may fail to hear important information because he or she is distressed during the interaction. In addition, not disclosing the entire truth can inadvertently create a false sense of hope for a cure and perceptions of a longer life expectancy. In an extreme case, not delivering bad news effectively was directly linked to a patient's suicide (10)

There are communication protocols proposed in literature internationally that are effective in reducing the stress of professionals as well as facilitating the process of informing patients.Several evidence-based models have been developed and adapted for nursing clinical practice when delivering bad news (10). The most common models that are widely represented in the literature are the SPIKES (Setting, Perception, Invitation/information, Knowledge, Empathy, and Summarize/strategize) model and the PEWTER model as the study done in Columbus shows (12)

The PEWTER model provides a mnemonic for defining a framework to communicate bad news effectively. The PEWTER model was originally created as a tool for school counselors but has been effectively used in clinical settings when delivering life-changing news to patients (39).

One of the most frequently cited and well-organized set of guidelines is the SPIKES protocol. It was applied and tested in Canada on the physicians practice as a quantitative study. The acronym SPIKES stands for the six recommended steps in the process of breaking bad news: (a) Setting up the interview, (b) assessing the patient's Perception, (c) obtaining the patient's Invitation,(d) giving Knowledge and information to the patient, (e) addressing the patient's Emotions with empathic responses, and (f) Strategy and Summary. Within each of these general steps, more detailed tasks and techniques are suggested. For instance, when setting up the interview, physicians are

encouraged to find a private location, involve significant others, sit down, make eye contact, and avoid interruptions. When giving knowledge and information, the protocol recommends warning the patient that bad news is coming, using nontechnical language (e.g., spread rather than metastasized), avoiding undue bluntness (e.g., "You have very bad cancer and unless you get treatment immediately you are going to die," and intermittently assessing the patient's understanding(10)

2.7 Conceptual framework

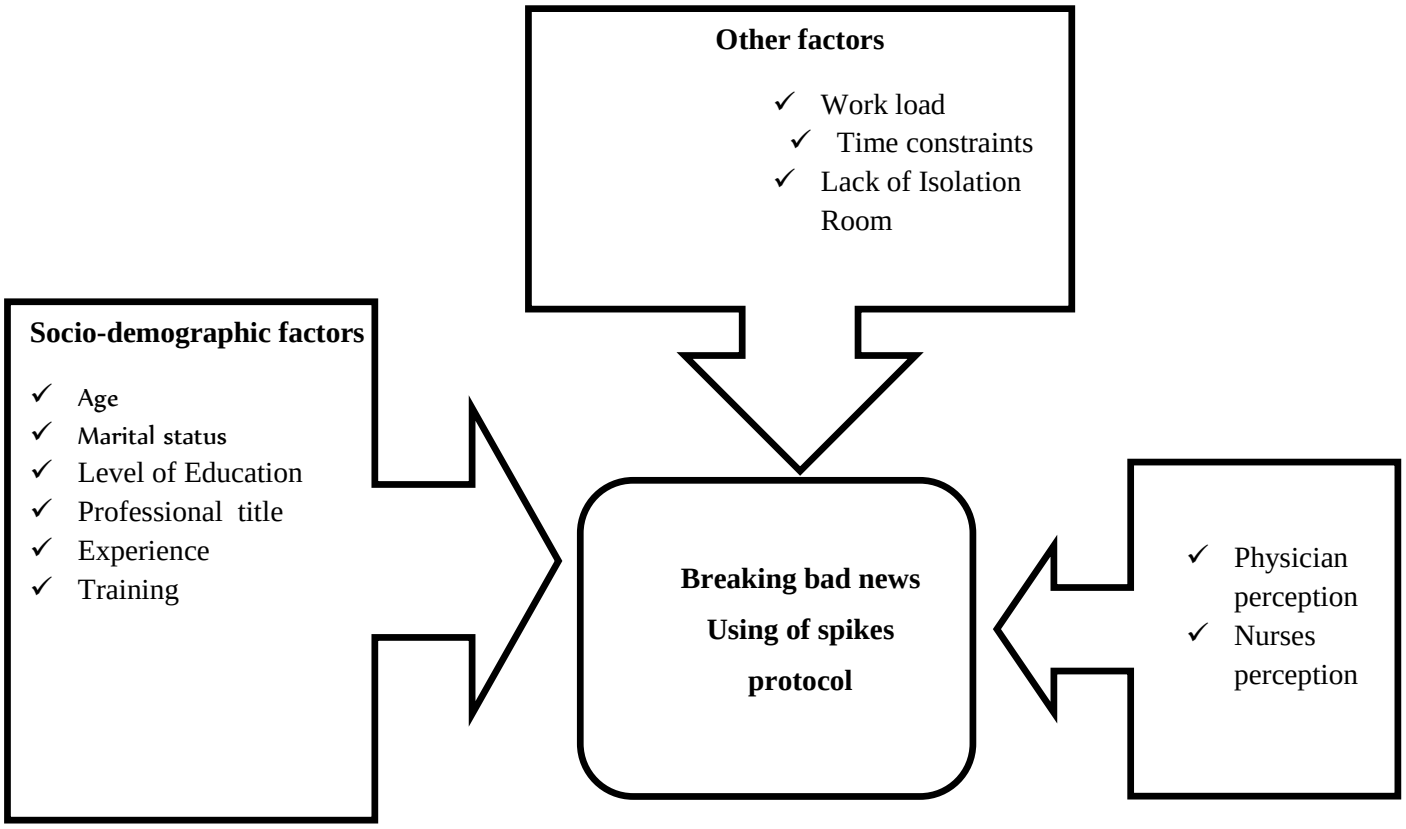

Fig 1: Schematic presentation of conceptual frame work adapted from study conducted in Canada(10, 37)

3. Objective

3.1 General Objective

- To assess breaking bad news practice and barriers among Physicians and Nurses

3.2 Specific objective

- To assess breaking bad news practice among Physicians and nurses by using SPIKES protocol in each unit those provide care for a cancer patient at Tikur Anbessa Specialized hospital and St, Paul millennium medical college in Addis Ababa.
- To explore experience and barriers related to breaking bad news among physicians and nurses in each unit those provide care for a cancer patient at Tikur Anbessa Specialized hospital and St, Paul millennium medical college in Addis Ababa
- To identify factors associated with breaking bad news practice of Physicians and nurses in Tikur Anbessa Specialized hospital land St, Paul millennium medical college, Addis Ababa.

4 Methods

4.1 Study design

Facility based cross-sectional study design, with both quantitative and qualitative method was conducted.

4.2 Study area and period

The study was carried out at Tikur Anbessa Specialized Hospital and St, Paul Hospital Millennium Medical Colleague among Physicians and Nurses working in each units who are providing care for a cancer patient which includes: oncology unit, hematology unit, pediatric oncology ward and Gynecology unit of Tikur Anbessa Specialized Hospital and St, Paul Hospital, Millennium Medical collage Addis Ababa, Ethiopia, from March 10 – March 30, 2018. Both hospitals receive referral from all direction (North, East, West and South) of the country. Tikur Anbessa Specialized Hospital, first largest referral hospital, St. Paul Hospital Millennium Medical College, the second largest referral hospital are located in the center of capital city, Addis Ababa, Ethiopia. They are the only center for diagnoses, treatment and care of patients with cancer in the country (38). TASH has 918 nurses and 522 physicians. The Hospital has a total of 600 beds according to the report from the statistics office of the hospital; of which 18beds are allocated to adult cancer patients' and 26 beds are assigned to pediatric oncology and hematology.St. Paul Hospital Millennium Medical College has 392 beds and800 clinical stuffs, out of these 265 are nurses.

4.3 population

4.3.1 Source population

All nurses and physicians working in Tikur Anbessa specialized Hospital (TASH) and St, Paul Hospital Millennium Medical collage were the source population.

4.3.2 Study population

Nurses and physicians working at Tikur Anbessa specialized Hospital and St, Paul Hospital in each units that provide care for a cancer patient including Oncology unit, hematology unit, Pediatrics oncology ward and Gynecology unit

4.4 Sampling process

4.4.1 Sample Size Determination

Quantitative part

The sample size was estimated for breaking bad news by using single population proportion formula and assuming 95% confidence level (1.96), marginal error of 5% and since there is no similar published study found in the country that addressed the breaking bad news, the researcher premeditated to make use of 50%. Using single population proportion formula:

$$n = \frac{\left(Z \frac{\sim}{2}\right)^2 p(1-p)}{d^2}$$ Where, n = is the required sample size

z = the value of the standard normal curve score corresponding to the given

Confidence interval = 1.96

p = (50%) for the reason that there is no related study which are conducted in the country.

d = margin of error 5%

$$n = \frac{(1.9^2)(0.5(1-0.5))}{0.0^2} = 384$$

In view of the fact that the population is less than 10,000 a correction formula has been used. Therefore correction formula is used:

$n = n' / 1 + \frac{n}{N}$ Where n_o is the initial sample size and N is the total population

$$n = 384 / 1 + \frac{3}{3}$$

$$n = 192$$

N.B. the 384 is referring to the total number of physicians and nurses who are working in oncology department in both hospitals (Tikur Anbessa Specialized Hospital and St, Paul Millennium Medical College).

Then by adding 10% for non-response rate the final sample size was =<u>211</u>

Qualitative part

Sixteen physicians and eight nurses in each unit that provide care for cancer patientswere involved in the in depth interview based on saturation theory. The sample sizes was determined on the basis of theoretical saturation—the point in data collection when new data no longer bring additional insights to the research questions. The principal investigator was conducted the interview by using developed interview guide. Informed Consent was taken from each participant for an in-depth interview.

4.4.2 Sampling technique

The study hospitals were selected purposively depending on the only cancer service provided in the hospitals. The study subject was selected by using Cluster sampling technique based on the list of physicians and nurses obtained from each unit that providing care for a cancer patient.First the sample for cluster calculated by proportional allocation then the calculated sample for physicians from TASH 92 and 21 from SPHMMC have been selected with random sampling; and the nurses sample was also selectedsimilarly 69, and 29 from TASH and SPHMMC, respectively. The steps to calculate the proportional sample has been presented in the schematic presentation as follow in Figer 2.

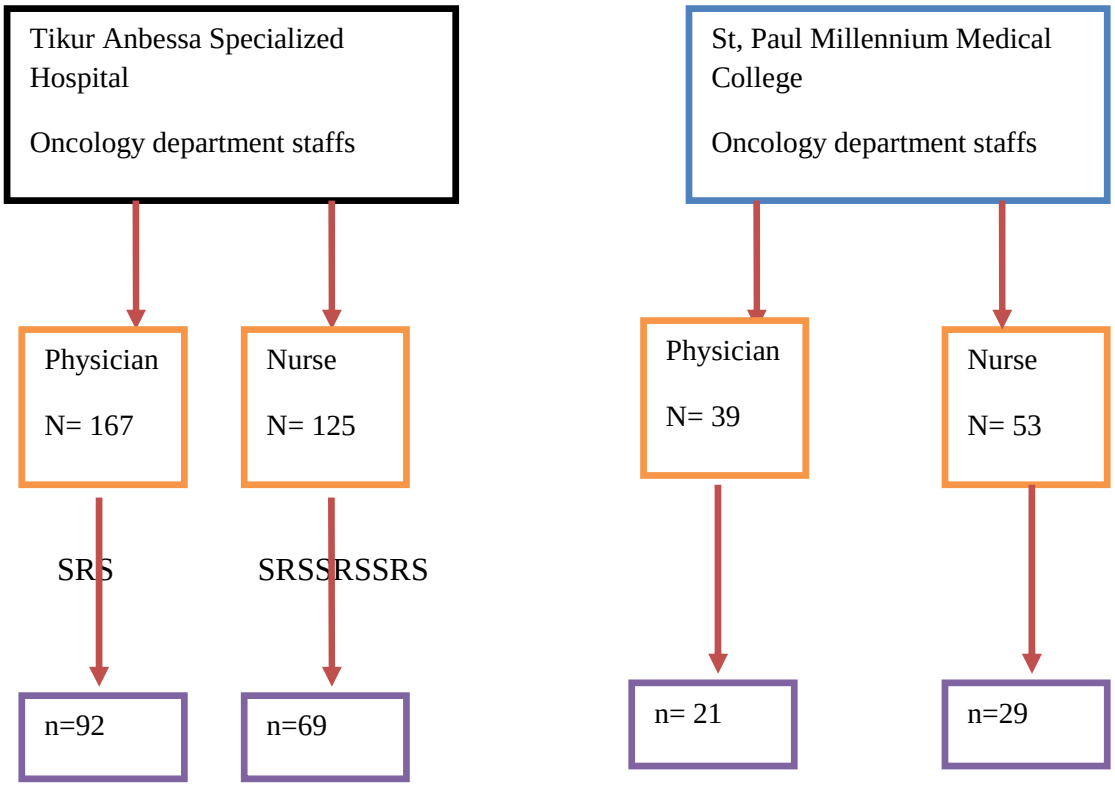

Fig 2.Schematic presentation of proportional allocation of the sample and sampling technique

4.5Data Collection process

4.5.1 Data Collection Instrument

Self-administered questionnaire which is adapted from study conducted in Canada on application of SPIKES protocol and physicians'' perception of breaking bad news was used to gather information from physicians and nurses. The questions assess respondent's practice and explore barriers during breaking of bad news. These questions consists six steps of SPIKES protocol which focuses on how to deliver bad news. These are: - 1) setting up the interview which includes arranging for some privacy, involving significant others, sitting down, making connection with the patient and managing time constraints and interruptions. 2) Assessing the patient's perception. 3) Obtaining the patient's invitation. 4) Giving knowledge and information to the patient. 5) Addressing the patient's emotions with empathic responses. 6) Strategy and summary(10, 37).And an interview guide was used for the qualitative part and collected by principal investigator.

The data collection instrument contains three sections. The first section comprises a socio demographic and profession related variables. The second section contains breaking bad news questions and the third section comprises the SPIKES protocol practice questionnaire.

4.5.2 Eligibility criteria

4.5.2.1 Inclusion criteria

All Physicians and Nurses currently working in each unit that provide care for a cancer patient at Tikur Anbessa Specialized Hospital and St, Paul Millennium medical college were included.

4.5.2.2 Exclusion criteria

Physicians and Nurses on annual leave, sick leave critically ill, maternal leave during the data collection period.

4.6 Study variables

4.6.1 Dependent variable (outcome variable)

- Practice of breaking bad news by using SPIKES protocol

4.6.2 Independent variables

- Socio demographic factors: Age ,Sex
- Training
- Service year
- Level of Education
- Professional title
- Time
- Workload
- Physician and nurses perception

4.7 Operational definition

- **Breaking bad news**:- Breaking bad news is a process of delivering news, which may negatively affect a patient's view of the future(13).
- **SPIKES protocol practice**:- Individual those ever used SPIKES protocol during breaking bad news for cancer patients or relatives are considered as practicing the protocol
- **SPIKES protocol not practiced**:- Individual those ever not used SPIKES protocol during breaking bad news for cancer patients or relatives are considered as not practicing the protocol

4.8 Data collection procedure

Quantitative data collection

The researcher compiled a list of employees with the help of coordinators in each unit and quantitative data was collected by means of self-administered questionnaire from physicians and nurses currently working in oncology unit and qualitative by an in-depth interview from physicians and nurses. Data collection was conducted by three data collectors and a supervisor and the principal investigator was supervised the whole process for the sake of consistency and completeness. For the qualitative study each of the in depth interviews was tape recorded and transcribed and translated.

4.9 Data entry and analysis procedures

Quantitative: The data was entered in to Epi data version 3.1 and analyzed by SPSS version 20. Before analysis the data, responses were coded as appropriate. Simple descriptive statistics such as frequencies, mean, and measures of standard deviations was used and displayed by using tables and graphs. Bivariate and multivariate analysis was used to determine associated factors. Odds ratio and significance of statistical association was tested using 95% confidence interval and p- value less than 0.05 was considered as statistical significance for associations. Results of the study was narrated and summarized in texts and presented using tables and graph.

Qualitative: The data gathered through an in-depth interview and recorded using a voice recorder was transcribed and translated to English. Coded data will be affixed; these codes was sorted and matched to identify similarities and differences. The coded data was grouped under selected themes, summarized manually and narrated.

4.10 Data quality management

To maintain the quality of the data structured and validated English version of questionnaire was adopted. To ensure data quality, the data collectors (Bsc nurses) were provided one day training and all the collected data was checked daily for completeness, accuracy and consistency by the supervisor and principal investigator. Before data entry, data was checked again for its completeness.

4.10.1 Pretest

Before actual data collection is started, the instrument was pretested on 5% of the study participants in Tikur Anbessa Specialized Hospital at 5th police station branch. The pretest subjects were not included in the actual study. The questions was tested for its clarity and relevance and carried out by Principal investigator. Those participated on the pretest was excluded from actual data. Based on the feedback taken from them the necessary amendment was taken.

4.10.2 Ethical consideration

Ethical clearance was obtained from ethical clearance committee of school of Nursing and midwifery and IRB of college of health sciences of Addis Ababa University. After receiving ethical clearance, permission to conduct the research was obtained from Tikur Anbessa Specialized hospital and St, Paul. Millennium Medical Collage Information sheet was prepared and written consent was obtained from all eligible participants of the study, all participants were informed the purpose of the study and their participation was voluntary. Confidentiality was insured by anonymity of names or any personal identity.

4.10.3 Dissemination of the result

The result of this study will be presented to Addis Ababa University College of health science, school of nursing and midwifery as partial fulfillment of master's degree in oncology. Furthermore the result will be shared with Tikur Anbessa Specialized Hospital and St, Paul Millennium medical college and also the manuscript of the research will be prepared and submitted to appropriate journals for possible publication.

5. Result

5.1 Socio-demographic characteristics of study population

A total of 203 respondents with response rate of 96.1 % were participated in the study and 3.9% of the participants were not responded. Out of 203 participants of the study 104 (51.2%) are males and 99 (48.8 %) are females. Majority 96 (47.3 %) of the participants were in the age group of 27 - 31, followed by the age group 22-26 (31.5 %) and the mean age of respondents was 29.5 years with ± 6.6 standard deviation, the maximum and minimum ages of respondents were 22 and 63 respectively. Regarding their religion, majority 128 (63.1%) were orthodox Christian followers and concerning educational status of respondents 148 (72.9%) were degree holders (Table 1).

Table-1: Socio-demographic characteristics of study participants at Tikur Anbessa Specialized Hospital and St. Paul Millennium Medical collage Addis Ababa, Ethiopia, 2018 (n=203).

Variable	Category	Frequency	Percentage
Sex	Male	104	51.2 %
	Female	99	48.8 %
Age	22-26	64	31.5 %
	27-31	96	47.3 %
	32-36	24	11.8 %
	>37	19	9.4 %
Religion	Orthodox	128	63.1 %
	Muslim	21	10.3 %
	Protestant	46	22.7 %
	Catholic	3	1.5 %
	0ther	5	2.5 %
Marital status	Single	116	57.1%%
	Married	87	42.9 %
Ethnicity	Amhara	100	49.3 %
	Oromo	47	23.2 %
	Gurage	22	10.8 %
	Tigre	22	10.8 %

	Other	12	5.9 %
	Diploma	2	1.0%
Level of education	Degree	148	72.9%
	Masters	17	8.4%
	Sub specialty	7	3.4%
	Oncologist	23	11.3%
	Hematologist	2	1%
	Pedi oncologist	1	0.5%
	Gyny oncologist	3	1.5%
Specialty	Nurse	94	46.3
	General practitioner	29	14.3
	Resident	65	32
	Fellow	2	1
	Oncology assistants professor	8	3.9
	Consultant	5	2.5
Service year	0-4	154	75.9
	4-9	39	19.2
	>9	10	4.9

5.2 Training status

Among the participants only 17.2% of them were got training while 82.85 of the respondents were not attended any training related to breaking bad news (Table 2). In the qualitative part most of the participants were mentioned as they did not get training for example one of the male residents said that"… ……..... *At the time I deliver the bad news I organize my words based on my experience and I didn't attend any training related to breaking bad news"*

Table-2: Training status of physicians and nurses at Tikur Anbessa Specialized Hospital and St. Paul Millennium Medical Collage Addis Ababa, Ethiopia, 2018 (n=203).

Variable	Frequency	Percentage
Ever attended Training	35	17.2
Type of training attended was formal education	15	42.9
Type of training attended was arranged training	12	34.3
Type of training attended was sat in with practicing clinicians	4	11.4
Type of training attended was all type	4	11.4
Time length of training attended was ≤ 1year	14	40
Time length of training attended was 1-2 years	7	20
Time length of training attended was >2 years	14	40

5.3 BREAKINGOFBAD NEWS

According to this study, more than half of heath care providers 96 (47.3%) ever delivered bad news for cancer patients and whereas 107 (52.7%) did not ever deliver bad news. Among the participants those ever delivered bad news 73 (76%) feel patients should be told everything about their cancer and 47 (49%) feel comfortable in discussing with patients/relatives issues concerning cancer diagnosis, prognosis and life expectancy. Regarding to for whom should the bad news be delivered

69 (71.9%) of health care providers believe both patient and family while 1(1%) believe only for family should be delivered.

According to this study 28 (29.2%) of health care providers feel telling all to patients take away their hope and their survival lessens. Among the barriers that prevents them from breaking bad news, high patient flow, lack of isolation rooms and work load were mentioned by 34.5%, 37.3% and 25% respectively (Table 3).

The qualitative part also shows the delivering of breaking bad news for instance one of the residents says that "*… I delivered bad news for cancer patients and also relative. …… I took time to discuss with them and first I told about treatment as it can bring better then after I break the bad news*". The other participants were mentioned the problems they faced during breaking bad news by saying that *"The challenges that I encountered were if it is first time they get feared and depressed and deny and also they act one thing frequently.……"*

However in relation to nurses almost all of them did not break bad news. The 27 years old female nurses said that " *I didn't break bad news for cancer patients. This task is not ours and most of the time it is done by physicians but I attended when the bad news has been broken and also I assisted if there is any unclean by elaborating for patients. ……..the other reason why I didn't broke is nurses are not frontiers to see patients and I don't know either any protocol is needed to break bad news or not and SPIKEs protocol is new for me.* And also a 24 old male nurses mentioned that *"…… breaking bad news is done by doctors and not done nurses……..because the history of patient is known by physicians …….. most of the time I give support and council them to search for spiritual treatment……*

Table-3: breaking bad news of physicians and nurses inTikurAnbessa Specialized Hospital and St. Paul Millennium Medical collage Addis Ababa, Ethiopia, 2018. (n=203)

Variable	Physician	Nurse	Total	Percentage
Ever deliver bad news for cancer patients	93	3	96	47.3%
Ever deliver bad news for cancer patients &relative	91	2	93	45.8%
Provides breaking bad news to patients/relatives Lessthan5times/m (n=96)	32	1	33	34.4
Provides breaking bad news to patients/relatives5to10times/m (n=96)	36	2	38	39.6
Provides breaking bad news to patients/relatives10to20times/m (n=96)	9	0	9	9.4
Provides breaking bad news to patients/relativesMorethan20 times/m (n=96)	16	0	16	16.7
Feels very good about own ability to break bad news (n=96)	7	1	8	8.3
Feels good about own ability to break bad news	33	0	33	34.4
Feels fair about own ability to break bad news	47	1	48	50
Feels poor about own ability to break bad news	6	0	6	6.3
Feels very poor about own ability to break bad news	0	1	1	1
Feels comfortable in discussing with patients	44	3	47	49
Believes bad news be delivered for family	0	1	1	1
Believes bad news be delivered for Patient	24	2	26	27.1
Believes bad news be delivered for both	69	0	69	71.9
Believes patients should be told everything about their diagnosis	70	5	73	36
If the relatives want to conceal diagnosis agree to relative and avoid difficult questions	36	1	37	18.2
If the relatives want to conceal diagnosis Tell them to take the patient to a doctor who agrees to	9	1	10	4.9

whatever the relatives say				
If the relatives want to conceal diagnosis Tell the patient about the truth, only when asks	39	1	40	19.7
If the relatives want to conceal diagnosis, disagree with relatives & tell patient about his diagnoses and disease prognosis to the patient	23	2	25	12.3
Feel relatives should be told first about the diagnoses and patients only later if they consent	39	2	41	42.7%
feel telling all to patients take away their hope and their survival lessens	27	1	28	29.2
think patients don't want to know about the diagnosis and prognosis	17	2	19	9.4
Discussing diagnosis is the most difficult task	40	1	41	42.7
Telling patient about recurrence is the most difficult task	26	1	27	28.1
Talking about end of active treatment and beginning palliative treatment is the most difficult task	45	0	45	46.9
Discussing end-of-life issues (do not resuscitate) is the most difficult task	35	2	37	38.5
Involving family/friends of patient is the most difficult task	8	0	8	8.3
being honest but not taking away hope	51	1	52	54.2
The most difficult part of discussing bad news is dealing with the patient's emotion (crying, anger)	36	2	38	39.6
The most difficult part of discussing bad news is Spending the right amount of time	21	0	21	21.9
Time constraint	12	8	20	20.8
Workload is the barriers to deliver breaking bad news	16	8	24	25
Lack of isolated rooms is the barriers to deliver breaking bad news	16	24	40	41.7

High patient flow is the barriers to deliver breaking bad news	19	18	37	38.5
Other factors are the barriers to deliver breaking bad news	5	37	42	43.8

5.4 PRACTICE OF SPIKES PROTOCOL

Among all of 203 study participants 34 (16.7 %) heard about SPIKES protocol and of them only 16 (47%) of health care providers used it.

When they were asked about the practice of SPIKES protocol, 16 (47%) of them practiced setting up the interview, assessing the patient's perception, addressing the patient's emotions with empathic responses and summarizing and strategy while 15 (44.1%) of them practiced obtaining the patient's invitation and 14 (41.2%) of health care providers practiced giving enough knowledge and information to the patient (Table 3). As the result of in depth interview shows majority of the health care providers didn't know SPIKES protocol as one of the residents said that"…….i *didn't heard SPIKES protocol and never used it. ……I didn't use any protocol that can help me to deliver bad news"*. And also the 33 years old physician mentioned that"…….. *everybody uses his/her own approach from what he/she read. …… when I broke I try to use simple words.…….. I prefer first to break for families or relatives.*

On the other hand one of the residents said that"……*in our society breaking bad news are very difficult because in inadequate knowledge about the disease and they lose hope easily…… And as a country we don't have a guideline that supports us the way of breaking bad news. Even if I used SPIKES protocol some of the steps are difficult to apply in our hospital because of no isolation room and workload……"*.even ifthey know the protocol some of them mentioned as they not practice the SPIKES protocol for instance A38 years old oncologists said that *" …….. First I told them type of disease and then the outcome. I couldn't tell them in detail because of time…..how ever when they get confused I took time and explain for them. I know SPIKES protocol but I didn't use it because of high patient flow and no enough of time to practice ……..i use my personally designed steps.*

Table-4: Practice of SPIKES of physicians and nurses in Tikur Anbessa Specialized Hospital and St. Paul Millennium Medical Collage Addis Ababa, Ethiopia, 2018.

Variable			**Physician (n)**	**Nurse (n)**	Frequency	Percentage
ever heard about SPIKES protocol	Yes		27	7	34	16.7
	No		82	87	169	83.3
use SPIKES protocol	Yes		13	3	16	47
	No		14	4	18	53
Practice of SPIKES protocol	Setting up the interview	Arranging for some privacy	10	3	13	38.2
		Involving significant others	10	1	11	32.3
		Sitting down	12	3	15	44.1
		Making connection with the patient	13	3	16	47
		Managing time constraints and interruptions.	10	3	13	38.2
	Assessing the patient's perception	Before breaking bad news, did you find out what the patient knows about his or her illness	13	3	16	47
		Do you ask questions that reveal patient perceptions?	12	3	15	44.1
	Obtaining the patient's invitation	Do you ask patients' permission to share bad news?	12	3	15	44.1
		Do you need to inform patients about possible outcomes before ordering tests or procedures?	12	3	15	44.1

	Do you ask the patients if they want only basic information or a detailed disclosure?	11	1	12	35.2
Giving enough knowledge and information to the patient?	Do you warn the patient that bad news is coming?	11	3	14	41.2
	Do you use simple, clear language to explain?	13	3	16	47
	Do you avoid complicated medical terms?	13	3	16	47
	Do you avoid being too blunt?	12	3	15	44.1
	Do you assess person's understanding often?	12	3	15	4.1
Addressing the patient's emotions with empathic responses	Do you identify patients emotion related to bad news?	12	3	16	47
	Do you give time to express his or her feelings?	13	3	16	47
	Do you acknowledge the patents emotional response to bad news?	13	3	16	47
	Do you give response to patients' emotion?	13	3	16	47
Summarizing and strategy?	Do you summarize the areas discussed to minimize the patient's anxiety?	13	3	16	47
	Do you assure your availability to address symptoms, answer questions, and meet other needs?	13	3	16	47

5.5 Use of SPIKES protocol

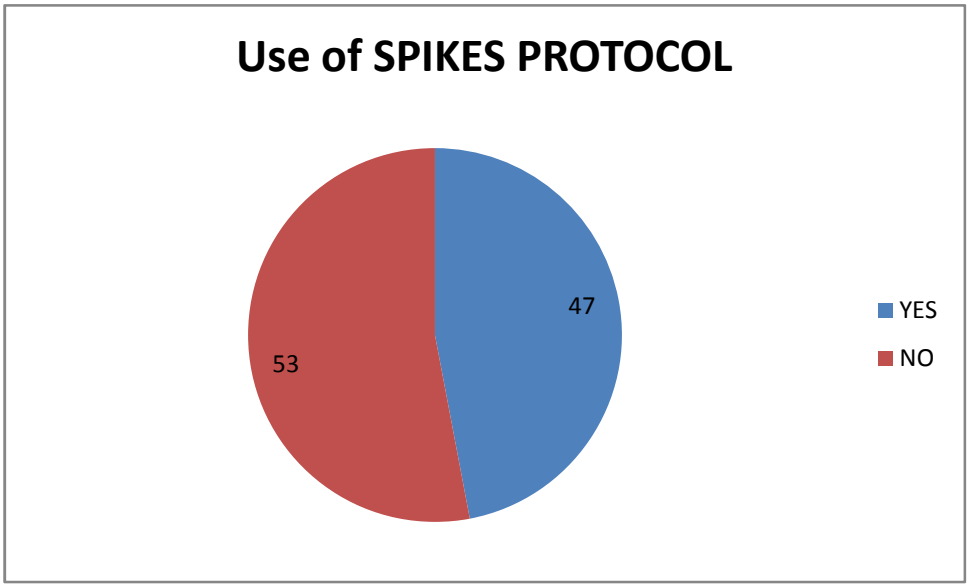

Fig 3: **Percentage use of SPIKES protocol of physicians and nurses in Tikur Anbessa Specialized Hospital and St. Paul Millennium Medical collage Addis Ababa, Ethiopia, 2018.**

Out of the total participants 16 (7.9%) were used the protocol during breaking bad news for cancer patients or relatives whereas 187 (92.1%) of physicians and nurses were not used SPIKES protocol.

5.6 Bivariate and multivariate logistic Regression analysis of practice of SPIKES protocol and contributing factors at Tikur Anbessa Specialized Hospital and st.paul Millennium Medical Collage

Bivariate and multivariate analyses were performed between use of SPIKES protocol (dependent variable) and associated factors (independent variable). Binary Logistic regression was performed to assess the association of each independent variable with use of SPIKES protocol and the marital status, training, frequency of breaking bad news performance in a month, service yearand feeling comfortable in discussing with patients were showed significant to be candidates for multivariate regression at p=0.2 . The variables those showed association in binary logistic regression were included in the multi logistic regression and the significance of the variables were checked at p<0.05. Among the variables, marital status and having training of SPIKS were only remained being significant with use of SPIKES protocol.

In multi-logistic regression analysis, it was found that Health care providers those had training related to breaking bad news were 12.5 times **{AOR=12.5; 95% CI (1.7-27.6)}(p value0.011)**more likely to use SPIKES protocol compared to health care providers those had no training related to breaking bad news. Married health care providers were 7.5 times more likely to use SPIKES protocol compared to single health care providers **{AOR=7.5; 95% CI (1.16-49.2)}**.**(P value 0.034)(Table 5)**.

Table 5: Factors associated with use of SPIKES protocol in Tikur Anbessa Specialized and St. Paul Millennium Medical Collage Addis Ababa, Ethiopia, 2018

Variables		Use of spikes protocol		COR, 95% CI	AOR, 95% CI	P value
		Yes	No			
Marital status	Single	3(2.6)	113(97.4)	**1**	1	
	Married	13(14.9)	74(85.1)	**6.6(1.8, 24.0)***	**7.5 (1.16, 49.2)****	**0.034**
Training	Yes	9(25.7.)	26(74.3. %)	**7.96 (2.7, 23.2)**	**12.5 (1.7, 27.6)****	**0.011**
	No	7(4.2%)	161(95.8%)	**1**	1	

6. Discussions

This facility based cross sectional study has attempted to assess the breaking bad news practice and barriers among Physicians and nurses those working in oncology unit at Tikur Anbesa Specialized Hospital and St.Paul Millennium Medical Collage, Addis Ababa. Out of 203 participants of the study 104 (51.2%) are males and 99 (48.8 %) are females. Majority 96 (47.3 %) of the participants were in the age group of 27 - 31, followed by the age group 22-26 (31.5 %) and the mean age of respondents was 29.5 years with ± 6.6 standard deviation.

The study found that the Physicians and nurses those used SPIKES protocol during breaking bad news for cancer patients were 8.3%. The number of SPIKES protocol using documented in this study finding was inconsistent with the findings in Canada where 94.8% of health care providers were used SPIKES protocol and made sense for them (10**).** The difference of the result might be due to the difference of the study location and availability of training related to SPIKES protocol. In the case of research conducted in Canada the study participants were those took SPIKES protocol training and also the difference could be due to difference of clinicians to patient ratio that can affect the amount of time they had available to deliver bad news

Among participants those ever broke bad news 34.4% of them break bad news for cancer patients or relatives less than five times in a month and 26.1% of heath care providers break ten or more times per month. This finding was inconsistent with the finding in America where over 75% of clinicians reported breaking bad news to a patient at least 5 times in a typical month, with 45% doing so 10 or more times per month (29). This difference could be due to study participants in the present study it was conducted among physicians, nurses and midwives those working in oncology unit while in the case of America study it was done only among physicians and also might be due to high number of study subjects in the research conducted in America.

In relation to training, 82.8% of health care providers had not had training related to breaking bad news. Thirty five heath care providers had specific training during undergraduate or postgraduate studies and through discussions, face to face and interviews with more experienced colleagues. This finding was consistent with the study conducted in Greek where majority of the study participants had not had specific training in breaking bad news (20).

Among participants those ever broke bad news 54.1% mentioned that being honest but not taking away hope is the most difficult aspect of breaking bad news. This was in line with the study done in

America where fifty-eight percent of all clinicians in the survey identified “being honest but not taking away hope” to be the most difficult aspect of breaking bad news(29)**.**

In the present study 39.6% of health care providers were break bad news for patients or relatives 5 to 10 times in a month. This finding was consistent with the finding in Canada where the majority of clinicians were broke bad news 5 to 10 times in a month for patients or relatives. (10**).**

Concerning to the most difficult task during breaking bad news talking about end of active treatment and beginning palliative treatment, discussing diagnosis and discussing end-of-life issues were mentioned by majority of participants. This finding was in agreement with studies conducted in Canada. (10**).**

In our study a number of clinicians mentioned time as the reason for not give detail information for patients during breaking bad news. As it was reflected in the qualitative part one of the oncologists reported by saying first I told them type of disease and then the outcome. I couldn’t tell them in detail because of time. This was comparable with the study finding in Malaysia where the majority of physicians reported that they did not have enough time for difficult discussions with patients (38).

According to the current research only one nurse was break bad news and almost all of them were not broke bad news. However literature recommends nurses to have strong communication skills in order to play a pivotal role in influencing patient satisfaction, adherence to plans of care, and overall clinical outcomes (42**).** The reason mentioned in the qualitative part of this study was most of the nurses were took as the breaking bad news is only the task of the physicians

Among the difficult part of discussing bad news being honest but not taking away hope was mentioned by the majority of health care providers followed by dealing with the patient’s emotion (crying, anger) and spending the right amount of time respectively. This result was consistent with the finding that was reported in the research conducted in Canada (10)

According to our research, in multi-logistic regression analysis, it was found that Health care providers those had training related to breaking bad news were 12.55 times {AOR=12.5; 95% CI (1.7-27.6)}more likely to use SPIKES protocol compared to health care providers those had no training related to breaking bad news. However the other researches do not done association with SPIKES protocol to see the significance.

7. Strengths and limitation of the study

7.1Strengths

- This study is the first study that attempted to assess clinicians breaking bad news by using SPIKES protocol
- Found base line information for future health plan.
- Can be used as base line data for future study.

7.2Limitation

- Lack of literatures hinders further discussion and comparison
- Since the study design is cross sectional it cannot revealed cause effect

8. Conclusion and Recommendation

8.1 Conclusion

The study found that there was a relatively low number of clinicians used SPIKES protocol and also came up agree to conceal the diagnosis to relatives and avoid difficult questions and having training related to breaking bad news. There is a need to design techniques of breaking bad news plan and implementation.

8.2 Recommendation

- There should be well-established courses in the specific techniques of breaking bad news in pre service training for physicians and nurses
- Physicians and nurses should get in service training specifically on how to break bad news that can significantly improve communication skills.
- More staffs should be considered to decrease work load and get enough time to practice protocol during breaking bad news
- Federal Ministry of Health should give emphasis for developing national guideline in breaking bad news practice.

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Annex I: English versionInformation sheet

Subject Information sheet

My name is _____ and I am data collector of the study conducted by Alem Minlekalew, master's student at Addis Ababa university department of nursing and midwifery, conducting this research for partial fulfillment of master's degree in oncology specialty. We would very much appreciate your participation in this survey. The information you provide will help us to contribute to improve practice of breaking bad news. Whatever information you provide will be kept strictly confidential, and will not be shared with anyone other than members of our research team. Participation in this survey is voluntary, and if you should come to any question you don't want to answer, and you can go on to the next question; or you can stop the interview at any time. Findings from this research are believed to serve practitioners to design evidence based programs. Moreover studies in similar topics which may be conducted in a different scale and depth can make use this study as a spring board. However, we hope you will participate in the survey since your views are important.

I welcome any question if you have any about the study and your participation. Should you have any questions about the research or any related matters, please contact the researcher at

Alem Minlekalew

Tel: +251912087293

E-mail: alem.minlek@gmail.com

Annex II. Consent sheet

I understand the nature of the study, benefits, and my right to voluntary participation, confidentiality and withdrawal from the study without any oppression. I have had the opportunity to ask questions and answered to my satisfaction. To express my agreement I have signed below.

I hereby freely consent to take part in this study.

Signature of the participant_____

Date_____

Name of data collector

Date _____/_____/_____E.C. signature_____

Yours Faithfully,

Annex III: Questionnaire

Questionnaire code: _____ Date _____

Name of data collector _____Signature_____

Part I: Background characteristics of health service providers

Instruction: Circle the responses for questions with alternatives

s.no	Questions	Alternatives/choices of response	Skip
101	Sex of the respondent?	1. Female 2. Male	
102	How old are you?	age in completed years_____	
103	What is your marital status?	1. Single 2. Married 3. Divorced 4. Widowed 5. Separated	
104	What is your Religion?	1. Orthodox 2. Muslim 3. Protestant 4. Catholic 5. Other(Specify) _____	
105	What is your Ethnicity?	1. Amhara 2. Oromo 3. Gurage 4. Tigre 5. Others_____	

106	What is your highest level of education?	1. Diploma 2. Degree 3. Masters 4. Sub Specialty 5. Oncologist 6. Hematologist 7. Pediatric oncologist 8. Gynecology oncologist	
107	What is your professional title?	1. Clinical Nurse 2. General Practitioner 3. Resident 4. Fellow 5. Oncology assistant professor 6. Consultant	
108	What is your total year of service in this unit?	Months ---------- Years.----------	
109	Have you ever attended training related to breaking bad news?	1. Yes 2. No	If no go to Question no 201
110	If you had attended training in techniques of breaking bad news what type of training is it?	1. Formal teaching 2. Arranged training on breaking bad news 3. Sat in with practicing clinicians 4. All type 5. Neither	
111	When you attended breaking bad news related training?	When ----------	
112	If you had attended training in techniques of breaking bad news where you did attended it?	1. In Ethiopia 2. Outside Ethiopia 3. Both	

Part II: questions on breaking bad news

No.	Questions	Alternatives/choices of response	Skip
201	Did you ever deliver bad news for cancer patients?	1. Yes 2. No	
202.	Did you ever deliver bad news for cancer patient relatives?	1. Yes 2. No	If no go to question No 214
203	In an average month, how often do you have to break bad news to a patient (diagnosis, recurrence, progressive disease)?	1. Less than 5 times 2. 5 to 10 times 3. 10 to 20 times 4. More than 20	
204	How do you feel about your own ability to break bad news?	1. Very good 2. Good 3. Fair 4. Poor 5. Very poor	
205	Do you feel comfortable in discussing with patient/relatives issues concerning cancer diagnosis, prognosis and life expectancy?	1. Yes 2. No	
206	For whom should the bad news be delivered?	1. Family 2. Patient 3. Both family and patient	
207	Do you feel patient should be told everything about their cancer?	1. Yes 2. No	
208	If the relatives want to conceal the diagnosis what you do? ***(Multiple answer possible)***	1. Agree to relative and avoid difficult questions 2. Tell them to take the patient to a doctor who agrees to whatever the relatives say 3. Tell them that if the patient asks them they will tell the truth, but if the patient doesn't ask you won't tell 4. Disagree to relatives and tell the	

		diagnoses and prognosis to the patient	
209	Do you feel relatives should be told first about the diagnoses and patients only later if they consent?	1. Yes 2. No	
210	Do you feel telling all to patients take away their hope and their survival lessens?	1. Yes 2. No	
211	Do you think patients don't want to know about the diagnosis and prognosis?	1. Yes 2. No	
212	Which do you find the most difficult task? ***(Multiple answer possible)***	1. Discussing diagnosis 2. Telling patient about recurrence 3. Talking about end of active treatment and beginning palliative treatment 4. Discussing end-of-life issues (do not resuscitate) 5. Involving family/friends of patient	
213	What do you feel is the most difficult part of discussing bad news?***(Multiple answer possible)***	1. Being honest but not taking away hope 2. Dealing with the patient's emotion (crying, anger) 3. Spending the right amount of time	
214	If you did not used to deliver breaking bad news what are the barriers that prevents you from breaking bad news?	1. Time 2. Workload 3. Lack of isolation rooms 4. High patient flow 5. Other specify_____	

Part III: questions on practice of SPIKES protocol

No	Questions	Alternatives	Alternatives	
301	Have you ever heard about SPIKES protocol?	1. Yes 2. No		
302	Do you use SPIKES protocol during breaking bad news?	1. Yes 2. No		
303	If yes, from the following elements of SPIKES which do you practice? ***(Multiple answer possible)***	1. Setting up the interview	1. Arranging for some privacy	2. Yes 3. No
			2. Involving significant others	1. Yes 2. No
			3. Sitting down	1. Yes 2. No
			4. Making connection with the patient	1. Yes 2. No
			5. Managing time constraints and interruptions.	1. Yes 2. No
		2. Assessing the patient's perception	1. Before breaking bad news, did you find out what the patient knows about his or her illness?	1. Yes 2. No
			2. Do you ask questions that reveal patient perceptions?	1. Yes 2. No
		3. Obtaining the patient's invitation	1. Do you ask patients' permission to share bad news?	1. Yes 2. No
			2. Do you need to inform patients about possible outcomes before ordering tests or procedures?	1. Yes 2. No
			3. Do you ask the patients if they want only basic information or a detailed disclosure?	1.Yes 2.No

		4. Giving enough	1. Do you warn the patient that	1. Yes

		knowledge and information to the patient?	bad news is coming?	2. No
			2. Do you use simple, clear language to explain?	1. Yes 2. No
			3. Do you avoid complicated medical terms?	1. Yes 2. No
			4. Do you avoid being too blunt?	1. Yes 2. No
			5. Do you assess person's understanding often?	1. Yes 2. No
		5. Addressing the patient's emotions with empathic responses	1. Do you identify patients emotion related to bad news?	1. Yes 2. No
			2. Do you give time to express his or her feelings?	1. Yes 2. No
			3. Do you acknowledge the patents emotional response to bad news?	1. Yes 2. No
			4. Do you give response to patients' emotion?	1. Yes 2. No
		6. Summarizing and strategy?	1.Do you summarize the areas discussed to minimize the patient's anxiety?	1. Yes 2. No
			2. Do you assure your availability to address symptoms, answer questions, and meet other needs?	1. Yes 2. No

Annexes IV. Guide for in- depth Interview with physicians and nurses working in each department provide care for cancer patients

Qualitative part

Greetings,…….I am currently doing a research to assess practice of breaking bad news among Physicians and nurses in Tikur Anbessa specialized Hospital and St,Paul Hospital in each department provide care for cancer patients to fulfill my thesis. I am here to interview you some issues which enable us to triangulate the quantitative findings of experience and barriers of breaking bad news and study from Tikur Anbessa Hospital and St, Paul physicians and nurse. The interview will take 10-15 minutes and your response to this interview will remain confidential and anonymous.

Are you willing to participate in this study?

1- No (say thank you) 2- Yes (continue interviewing)

Area of Interviewee: ----------

Sex of Interviewee: Male ☐ Female ☐

Age (completed years): ---------- Years

No. of years in service: ---------- Years

Highest level of Educational qualification: ----------

Date of interview/in-depth (Ethiopian calendar) _____/_____/_____

Thank you for your participation in the interview.

Part IV.I, in-depth interview guide for physicians and nurses on breaking bad news

1. Did you ever deliver breaking bad news for cancer patients or relatives? If no go to question number 4
2. How did you deliver breaking bad news for cancer patients or relatives? Could you tell us your experience?
    I. Do you use protocol during breaking bad news?
    II. What type of protocol do you use when you break bad news?
    III. Could you tell me step by step how you deliver bad news?
3. What barriers did you encounter when you deliver breaking bad news for cancer patients or relatives?
4. Why you didn't deliver breaking bad news for cancer patients or relatives?

I. Tell me the reason why you didn't deliver?
II. Did you attend when breaking bad news delivered?
III. Have you ever heard about SPIKES protocol?
IV. If yes, could you explain the steps of SPIKES protocol?

Finally, I would like to express my heartfelt thanks for your voluntary participation in this in-depth interview.

You have contributed your best!