Palliative Care Services in Cancer Treatment: A Study of the Current Scenario in Dhaka

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by
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Dedicated to my Parents

Certification Statement

This is to certify that the project titled "Palliative Care Services in Cancer Treatment/Oncology: A Study of the Current Scenario in Dhaka" submitted for the partial fulfillment of the requirements for the degree of Bachelor of Pharmacy from the Department of Pharmacy, BRAC University constitutes my own work under the supervision of Professor Eva Rahman Kabir PhD, Chairperson, Department of Pharmacy, BRAC University and that appropriate credit is given where I have used the language, ideas or writings of another.

Signed,

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Counter signed by the supervisor

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Abstract

Palliative care is explicitly acknowledged globally as an approach that falls under the human right to health. While there is a raised awareness of the vitality of palliative care for chronic diseases, this need is still unaddressed in several parts of the world. Furthermore, there is a fundamental difference between palliative care and hospice care and it is time to not only consider palliative care for those patients who have exhausted options for life-prolonging therapies. Therefore, to ensure the best care throughout the patient disease trajectory, there is urgency for the co-opting of palliative care with standard medical care for patients with serious illnesses. In Bangladesh, the concept of palliative care is still negligible and only a countable number of institutions and hospitals provide palliative care facilities whereas this important issue is being ignored by most of the institutions, hospitals and clinics in Bangladesh. Thus, the aim of this study is to investigate the current status of palliative care in Bangladesh and to highlight the importance of palliative care services offer to the patients. Furthermore, the primary objective of this study is to gain an understanding of the overall situation of palliative care in Bangladesh and the goal is to identify the scope of developing palliative care in Bangladesh. To develop the palliative care in Bangladesh, it is highly recommended to develop policy and guidelines for palliative care in the national level. Besides, it is also essential to upgrade national opioid control policy as well as upgrade and expend the palliative care education, training and certification program in harmony with the national guiding principle.

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List of Acronyms

APHPCN: Asia Pacific Hospice and Palliative Care Network

ASCO: American Society of Clinical Oncology

BCCPM: Basic Certificate Course in Palliative Care for Doctors

BCCPN: Basic Certificate Course in Palliative Care for Nurse

BSMMU: Bangabandhu Sheikh Mujib Medical University

CAPC: Center to Advance Palliative Care

COPD: Chronic Obstructive Pulmonary Disease

CPC: Center for Palliative Care

DGHS: Directorate General of Health Services

DHL: Delta Hospital Limited

DMCH: Dhaka Medical College & Hospital

EIU: Economist Intelligence Unit

GDP: Gross Domestic Product

HEQEP: Higher Education Quality Enhancement Program

HER: Electronic Health Record

IARC: International Agency for Research on Cancer

IASP: International Association for the Study of Pain

INCB: International Narcotic Control Board

JPG Public Health: James P Grant School of Public Health

NCD: Non-Communicable Diseases

NICRH: National Institute of Cancer and Research Hospital

NIPORT: National Institute of Population Research and Training

PCA: Palliative Care Assistant

PCU: Palliative Care Unit

QoL: Quality of Life

UGC: University Grant Commission

WCC: World Child Cancer

WHO: World Health Organization

WHPCA: Worldwide Hospice Palliative Care Alliance

1. Introduction

Palliative care is a multidisciplinary care, synonymous to medicine, nursing and other specialties, that focuses on improving the quality of life for patients of any age living with any serious illness, particularly with cancer. Along with managing pain and other symptoms, such as psychological and spiritual distress, palliative care also sets certain treatment goals for each individual patient with sophisticated care and advanced coordination (Amy S. Kelley, 2015). Professional palliative care consultants have advanced training in pain and symptom management, as well as possess effective communication skills with patients and families while conveying what to expect as disease progresses. Furthermore, they have the ability to provide continuity and coordination across disease stages and settings (Meier, Diane E., 2015). For hospitalized patients whose death is imminent, palliative care can alleviate distressing symptoms that are common during the last few days or weeks of life (Craig D. Blinderman, 2015). Such care is usually need-driven and has to be provided concurrently with disease treatment from the time of diagnosis of a serious illness. Studies show that in treating cancer patients along with the concurrent chemotherapy, specialist-level palliative care prolongs life (Meier, Diane E., 2015). Ideally, from the time of diagnosis, palliative care is provided concordantly with all other disease therapeutic treatments (Amy S. Kelley, 2015). Most commonly, palliative care is hospital based such as those utilized in hospital clinics, nursing home and cancer center etc. In contrast, hospice is another form of palliative care which is limited to patients who are expecting to die within a few months and those who are no longer showing a positive progression from treatment (Meier, Diane E., 2015). Hospice includes assisted-living facilities, residential hospice facilities, inpatient hospice units, or hospice-contracted inpatient beds (Amy S. Kelley, 2015).

However, in 2011 a public opinion on palliative care has showed almost 70 percent of American citizens are not aware of the specialty palliative care service (Center to Advance Palliative Care, 2011) and most of the health care professionals in America consider palliative care as a synonymous of the end of life care. This is mainly because clinicians recommends specialty palliative care with expertise in palliative medicine through hospice or inpatient consultation in situation where life prolonging treatment has failed and patient has almost reached the end of his/her life. Limiting the enrollment of specialty palliative care facilities with hospice hinders the best care of the patient.

Therefore, to ensure the best care throughout the patient disease trajectory, there is urgency for the co-opting of palliative care with standard medical care for patients with serious illnesses. There is a fundamental difference between palliative care and hospice care and it is time not to consider palliative care only for those patients who have exhausted options for life-prolonging therapies. Rather palliative care serves a strong purpose at any age and at any stage in any serious illness and proves most effective when provided together with curative treatment (Ravi B. Parikh, 2013).

1.1. The Need for Palliative Care Service in Hospital

Hospitals remain a major site for end-of-life care in the United States and in 2010 saw 29% of deaths occurring in the hospital with an average terminal admission lasting 7.9 days (Margaret Jean Hall, Shaleah Levant, & Carol J. DeFrances, 2013). Patients admitted in the hospital with the advanced stages of disease in cancer, congestive heart failure, chronic obstructive pulmonary disease (COPD), and many other life-threatening conditions get affected by the multiple distressing symptoms such as pain, fatigue, constipation, nausea, shortness of breath, sleep deprivation, loss of appetite etc. and some of these symptoms worsen as the patient approaches death. In any phase of illness, it is important to ensure the meticulous management of distressing symptoms, and this becomes a primary concern in the case of patients near the end of their lives. In such situation, there is no alternative to palliative care services (Craig D. Blinderman, 2015).

1.2. Core Components of Palliative Care

Palliative care is based on three components which are equally important required for the patients along with their medical care. These as follow (Amy S. Kelley, 2015):

- Physical and psychological symptoms management
- Spiritual distress support
- Communication skills in making complex decisions in the coordination of care

1.2.1. Physical and Psychological Symptoms Management

For any serious illness, pain is the most common symptom and it is one of the main distressing symptoms as well. A comprehensive routine care which includes formal symptom assessment with the use of validated instruments, standard clinical histories and review of systems with the validated instruments advances the identification of distressing symptoms and ensures comfort and better outcomes to the patients care. Basically, anorexia, anxiety, constipation, depression, delirium, dyspnea, nausea, and fatigue etc. common symptoms have been observed with the patient of serious illness (Amy S. Kelley, 2015).

1.2.2. Spiritual Distress Support

A patient in the advanced stage of their illness are prone to becoming psychologically vulnerable, urging the need for both mental and psychological support. As the patient reaches the end stage of their life, their religious and spiritual beliefs are more strongly expressed and they often demand to receive spiritual support from their physicians as well as family members. Numerous studies showed the importance of spirituality and religious practice with respect to get the better outcomes in seriously ill patients (Amy S. Kelley, 2015). In patients with life-threating illnesses, spiritual well-being and religious coping are associated with the patient's better quality of life (QoL). The immense pain suffered by the patient, often in their last stage of life, pushes them to seek spiritual and religious support as a way of reliving their painful condition (William D. Winkelman B. K., 2011). Winkelman et al. in an observational study showed a comparison in between patient whose spiritual concerns were met and whose spiritual concerns were unmet and it has been seen that cancer patients with spiritual support had significantly better quality of life than the patient whose spiritual concerns were unmet (William D. Winkelman B. K., 2011). Moreover, a multisite cohort study was conducted by Balboni et al. among 343 patients with advanced cancer and this study also showed that the patients whose spiritual needs were fulfilled and received more hospices were less likely to have burdensome non beneficial interventions near the end of life than those whose needs were not met (Tracy Anne Balboni, 2010). Furthermore, spiritual supports from the medical team also ensure the higher quality of life (QoL) for the patient (Tracy A.

Balboni, 2007) and (Tracy Anne Balboni, 2010). Therefore, for patients nearing the end of their lives, spiritual care from the medical system help them transition to hospice and improving their well-being near death. Furthermore, spiritual support also reduces the risk of receiving aggressive interventions of the patients at the end of their lives. So, it is needed to improve the facility of palliative care in hospitals so that patient-centered spiritual care can be implemented to the patients at the advance stage of their diseases and ensure the quality of life for the patients at the end of their life.

1.2.3. Communication Skills in Making Complex Decisions in the Coordination of Care

When patients reach the most vulnerable stage of their lives, they always require intensive care and attention from their attending physicians. The physical condition of a patient suffering from a life-threating illness can become significantly worse at any moment during his/her treatment. Therefore, a physician must possess good communication skills so that patients feel comfortable to open up with his/her physician and also the physician can disseminate any kind of news to the patient (Anthony L. Back, Robert M. Arnold, Walter F. Baile, & Kelly A. Fryer-Edwards, 2007). Previously, when cancer was totally incurable, physicians used to find it difficult to disclose the patient about their disease (Oken, 1961). Today, even though the treatment of cancer has improved a lot, physicians still have to develop their communication skills in order to discuss with patients about different unwanted situations of their diseases. Basically, these situation also includes disease recurrence, the presence of irreversible side effects, spread of disease or failure of treatment to affect disease progression, raising the issue of hospice care, revealing positive results of genetic test and resuscitation when no further treatment options exists. An informal survey was conducted among 700 physicians at the 1988 Annual Meeting of The American Society of Clinical Oncology (ASCO) where the participants were asked about their experiences in breaking bad news to their patients. It had been shown that around 60% of the respondents indicated that they had to break bad news to their patients 5 to 20 times per month and another 14% indicated that they had to do the same more than 20 times per month (Walter F. Baile, 2000). Bad news is defined as any information which adversely and seriously affects an individual's view of his or her future. In medical diagnoses, news can be bad from the perspective of the giver, the receiver, or both. Even though receiving bad news will always result in some level of discomfort, the intensity and duration of these feelings may vary insofar as physicians and patients fail to agree about the nature of the news (J. T. Ptacek & Eberhardt, 1996). Besides, if the patient is young and there are limited projections of successful treatment, breaking the bad news becomes the toughest job for the physician. In addition, patients also want to know about their disease diagnosis and their chances to live. A study conducted in Scotland at an oncology center with 250 patients revealed that 91% of patients wanted to know their chances of cure for their cancer and 91% of patients wanted to know the side effects of the therapy (Catherine Meredith, 1996). While physicians generally feel uncomfortable to deliver bad news to the patients such as poor diagnosis and convey unwarranted optimism, numbers of key communication tools have been incorporated into steps by steps which in addition help physicians to address patient's distress. SPIKES are one of the communication tools which have been segmented into six steps.

1.2.3.1. The Six Steps of SPIKES

Step 1: S – SETTING Up the Interview

It is extremely crucial for the physician to understand the circumstances of a patient and empathize before disclosing any upsetting news to the patient. The conveyer of the information should be mentally prepared to deliver the information to the patient as less painfully as possible and must also create an environment that should make the patient less agitated so that he or she can focus more on the details of the discussion with the physician. The delivery of any bad news should be made in such a way that can render the patient capable of making reasonable decisions about the future.

Following things should be considered in setting up the interview (Walter F. Baile, 2000):

- Let the patient sit in a comfortable chair
- Establish rapport with the patient
- Respect the patient's privacy

- Involve the patient’s close relatives in the discussion
- Provide enough time to the patient and avoid any kind of interruptions during the interview

Step 2: P – Assessing the Patient’s PRESCRIPTION

This step involves the physician clarifying the current health condition of the patient and also discussing the treatment protocol to be followed. Moreover, the physician is also responsible for not letting the patient become delusional about any of the treatment procedures or about any of his/her health issues. In this way, the physician will be able to craft his/her discussion style according to the patient understands (Walter F. Baile, 2000).

Step 3: I – Obtaining the Patient’s INVITATION

The physician invites the patient to discuss the information regarding the treatment procedures to understand whether the patient has a clear idea about the treatment protocol and prognosis (Walter F. Baile, 2000).

Step 4: K – Giving KNOWLEDGE and Information to the Patient

If the physician needs to disseminate bad news to the patient, it is always better to use a tone that can give the patient an idea that they are about to get bad news. For instance, “I am sorry, I have some bad news for you” is a certain way to start the conversation. Moreover, this also allows the patient to prepare mentally for news instead of the news coming as a shock.

The physician should be able to communicate with the patient and vice versa. Hence, it is important to use layman’s terms while conversing with the patient. Avoiding technical terms and using words that are easier to understand is crucial.

It is the physician’s duty to convey news as gently as possible to the patient. The physician should be careful with his or her tone and vocabulary to avoid scaring or agitating the patient. This will help the patient to cope with the mental stress upon receiving bad news and deal with things more bravely instead.

It is recommended to avoid throwing a lot of information all at once at the patient. Instead, the physician can deliver certain information in small amounts and check intermittently if the patient understands every information conveyed.

Lastly, it is important to encourage the patient to hold on and keep faith even when there is no hope. It’s the physician’s duty to not use phrases like “there is no hope” or “there is not much we can do” etc. This will demolish the patient’s willingness to fight their health issues and will put a worse impact on their condition (Walter F. Baile, 2000).

Step 5: E - Addressing the Patient’s EMOTIONS with Empathic Responses

Upon receiving upsetting news regarding the treatment procedure, a patient can easily suffer from isolation, shock and grief. In this situation, responding according to the patient’s emotional requirements is the most difficult challenges while breaking the bad news. At this moment, the physician must respect the patient’s sentiments. The physician should empathize with the patient and help the patient vent. Or, after giving the patient a brief period of time to express his or her feelings, the physician can make the patient understand that he/she can relate with his/her emotions by making some connecting statements. Patients always expect their physician as one of their most important sources of psychological support (Walter F. Baile, 2000). This can immensely help the patient break away from grief and isolation that they might suffer from (Buckman R, 1998).

Step 6: S – STRATEGY

In terms of making treatment strategies, a good and healthy communication is required between physician and patient. Before, making any plan, physicians have to check if the patient is in that mental stage to go for that kind of discussion. Besides, it is also important to show treatment options in front of patients and ask their opinion on that. It is not only a legal obligation but also it will make the patient feel that they are also part of the decision making process. It is also important to clarify any confusion the patient’s mind and thorough discussion with patient can erase any kind of confusion and also if patient overestimate or misunderstand the purpose of treatment. Moreover, to make an effective treatment strategy and plan for the patient, it is important for a physician to know about the patient, patient’s expectations and hopes as well. Moreover, symptom control, continuity of care and making sure that the best possible treatment is providing to patient can be very reassuring to patients (Walter F. Baile, 2000).

1.3. Palliative Care Facilities

Patients at the end stage of their lives, especially those at the advance stage of cancer, require a different level of palliative care services such as that provided through inpatient hospices, day care, hospice at home, specialist hospital or home support teams. The aim of palliative care is to ensure the patient’s highest quality of life during their treatment period, and to provide support for their nearest family members. For patients with advanced illness, the accurate assessment and measurement of their quality of life outcome is the fundamental goal of palliative care (J Hearn, 1999). A palliative care team usually consists of medical, nursing and allied health professionals who offer a range of services to support patient and patient’s family throughout the treatment process. An ideal palliative care team consists of the following members (Sheard, 2017):

- General Practitioner (GP)
- Nurse
- Palliative care specialist or physicians
- Cancer specialist Counsellor or psychologist
- Spiritual care practitioner
- Social worker
- Occupational therapist or physiotherapist
- Pharmacist
- Dietitian
- Volunteer

This dedicated team work closely to provide support to the terminally ill patients to ensure better QoL. A palliative care unit provide following facilities to their patents (Sheard, 2017):

- Advance Care Planning
- Prognosis
- Symptoms Management

- Caregiver Support
- Spiritual Support
- Respite (Short-term) Care
- Emotional Support

1.3.1. Advance Care Planning

Advance care planning is the process by which freedom is provided to the patients in order to aid them make decisions on their future health care. Advance care plans mainly focuses on patients' values, goals and preferences. It also emphasizes on the patients' ability to understand their medical condition, and also the benefits and afflictions associated with the treatments. Moreover, advance care planning is also essential in decision-making at the time when a patient is unable to make their own decisions or is unable to communicate (Care Knowledge Network, 2017). Here, palliative care teams are skilled with helping patients and their families talk about their goals and preferences for care, and the amount of treatment they want for the cancer (Sheard, 2017). This can involve difficult discussions about balancing the quality and length of life. This process is called advance care planning. Studies shows, patient finds advance care planning comforting and sometimes also empowering in their lives (Rafael Sumalinog, 2016). This facility allows patient to express their preferences for their health care. Every individual has their specific discrete preferences and these can alter over time. Advance care planning facility also gives patients the freedom to write down their treatment wishes, an action that is termed as an advance care directive, commonly called a "living will". Furthermore, this facility also provides a record of patient preferences for doctors. It includes family to consider if the patient has become unable to communicate or make decisions. These decisions usually include those about patient finances, property, medical care and lifestyle etc. Here, patient will have the freedom to revise or revoke their advance care directive (Sheard, 2017).

1.3.2. Prognosis

The term prognosis refers to know the expected outcome of someone's disease. Patients who are at the end stage of their lives tend to always want to be informed regarding the current status of his/her disease condition. When a patient asks a physician regarding the estimated time the patient have left to live, it becomes more difficult for a physician to make comments based on the patient current prognosis status, since every patient is unique and responds in a different way to different kinds of care (Sheard, 2017). Thus, palliative care team constantly discuss with the patient regarding their time to time prognosis, management of strategies and the setting of goals of care at each transition. While physicians make contextualized decisions on goals of care for the patient, it preserves hope and optimism in the patient mind and patient gets courage to fight against their illness (Rebecca Mcateer, 2013).

1.3.3. Symptoms Management Facility

Symptoms management is one of the core facilities that palliative care units offer to their patients. Although, it is not possible to eliminate all symptoms completely, symptoms management aid patients to be as comfortable as possible. Symptoms management includes the management of pain, nausea and vomiting, loss of appetite, shortness of breath, fatigue etc. (Sheard, 2017). During the cancer treatment period, the patient in advanced stage of cancer experiences pain and in around 43% of cases, the cancer patient pain remains undertreated (S. Deandrea1, 2008). Therefore their quality of life gets compromised. Patients with the advance stage of cancer often suffer severe pain; in response of which is required the expertise knowledge and training in pain management possessed by the palliative care team. Usually, this team follows the aforementioned options for relieving pain (Sheard, 2017):

- Use of pain medication – e.g. paracetamol and non-steroidal anti-inflammatory drugs to treat mild pain. Codeine is also used for controlling moderate pain and opioids such as morphine, oxycodone and fentanyl are used to alleviate severe pain
- Use of other types of medication such as anticonvulsants, local anesthetics or antidepressants to treat neurological ailments
- Use of anti-anxiety drugs for treating muscle spasms
- Provision of complementary therapies such as massage or acupuncture

Other side effects are also regulated with proper monitoring and the prescription of appropriate medication to the patient.

1.3.4. Caregiver Support

Family and caregivers plays an important role in palliative care and are also considered as a key part of the team. The major role of caregivers is to take part in the decision making process regarding the treatment of the person they care for. To avail this facility, the palliative care team collects written consents from the patient regarding the caregiver, after which the elected individual becomes eligible to be part of the palliative care team. This consent and the caregiver contact details are kept formally recorded in the individual's case file. Palliative care is not only improving the patient's quality of life but also for the family and caregivers as well. Thus, the caregiver facility gives an opportunity to both the patient and patient's family members to spend more quality time with each other so that the patient always gets enough mental support from their family members as well. Besides, there are also different types of support service providers who aid patient throughout his or her illness and demise. These support services, such as Meals on Wheels, home help or visiting nurses can also be considered as caregiver.

1.3.5. Respite (short-term) Care

Respite care is given to a hospice patient so that the usual caregiver can take rest. For a hospice patient, a dedicated person is required to take care of the patient in every day. A caregiver is often a family member and they might require time away from caregiving to undertake other things as well (Florida Hospice & Palliative Care Association, 2018). Studies have shown that in UK and Australia, up to 90% terminal ill cancer patients now spend the most of their last year of life at home (Samar et al, 2005; Skilbeck et al, 2005). Respite cares is frequently mentioned in the UK policy and guidance (National Institute of Clinical Excellence (NICE) 2004; Department of Health (DH), 2005; 2006; 2008a; 2008b) as a core factor in supporting caregivers so that they may carry on caring for longer and have an improved quality of life (Anna Wolkowski, 2015). There are different service providers available in Australia such as the Commonwealth Home Support Program who provides respite care to advance stage cancer patients while ensuring that both comfort and support are provided to the patient and their family members.

1.3.6. Emotional Support

While a patient is receiving palliative care, he or she may experience a different range of emotions during the treatment period. Some patients may feel shocked, fearful, sad, anxious or angry, while on the other hand others may feel relief or a sense of inner peace. Some patient may have constant depression (with symptoms including the inability of taking corrective decision or losing concentration in things) after receiving a diagnosis of advanced cancer. In this regard, palliative care plays a vital role and they offer the following facilities to the patients to overcome continuous depression (Sheard, 2017):

- To talk with the members of palliative care or treatment team
- To talk with a counsellor, social worker or psychologist
- Consult with religious leader or spiritual adviser
- Telephone support group or peer support program

2. Importance of Palliative Care in Cancer Treatment

Over time, substantial revolution has occurred in developing targeted and combined chemotherapy regimens to provide effective treatments to the patients with advanced cancer (Cancer Trends Progress Report, 2012). Advancements in cancer research are able to hold the disease progression; however, this research development is still lagging behind to manage the psychosocial, physical and existential elements which are associated with advanced cancer (Abernethy AP, Aziz NM, Basch E, et al., 2010). There is an urgent need for supportive care for these patients with advanced stage of cancer but there still exists an inconsistency in comprehensive cancer care due to the lack of knowledge with regard to the guide and dissemination of supportive care services, the lack of trained personnel to commence research and clinical care, and insufficient funding for developing and testing interventions to ease symptoms and enhance QoL (Lupu D, 2010). Therefore, to overcome this, early integration of palliative care services with standard oncology care soon after the diagnosis of advanced cancer has been introduced. Researchers are trying to identify the viability and efficiency of advanced models of palliative care concurrently with oncology care in the hospital care setting (Temel JS, Greer JA, Muzikansky A, et al., 2010).

2.1. Cancer Disease and Global Scenario

Cancer is characterized by the abnormal and uncontrolled growth of cells in the human body. Our body cell division is controlled by different gene and each particular gene ensures the normal cell division and growth of cell into the body. When a change occurs in the gene, it causes abnormal growth of the cell and form tumor which is the initial stage of forming cancer. This tumor starts to spread throughout the body a process known as secondary tumor or metastasis. Most of the cancer causes due to gene changes that can occur at any time over a person’s lifetime (Cancer Research UK, 2017). Besides, there are certain external factors such as smoking, chemicals, radiation, and infectious organisms and some internal factors such as hormones, immune conditions, and mutations that arise from metabolism; all these factors together or sequentially responsible in the prognosis of cancer in human body. The frequency of the common cancer and the death due to cancer varies geographically. Some of the common cancers occurring more frequently have been mentioned below (adopted from Jacques Ferlay, 2010):

- Cervical Cancer
- Breast Cancer
- Lung Cancer
- Colorectal Cancer
- Stomach Cancer
- Head & Neck Cancer
- Prostate Cancer
- Pancreatic Cancer
- Kidney Cancer
- Leukemia
- Non-Hodgkin's Lymphoma
- Liver Cancer
- Thyroid Cancer
- Endometrial Cancer
- Oral Cancer and
- Ovary cancer

In the list of cancers mentioned above, the following Table 2.1.1. summarizes the most frequent rate of new cancer patient and patient death due to cancer (GBD 2015 Mortality and Causes of Death Collaborators, 2015).

Table 2.1.1: Summary of the most frequent rate of new cancer patient and patient death due to cancer (GBD 2015 Mortality and Causes of Death Collaborators, 2015):

Cancer Name	No. of new cancer patient	Increase/decrease the rate in Percentage (%) 2005-2015	No. of death
Breast Cancer	2.4 million	43%	Women = 523000 Men = 10000
Lung Cancer	2 million	29%	1.7 million
Colon and Rectum Cancer	1.7 million	37%	832000
Prostate Cancer	1.6 million	26%	366000
Stomach Cancer	1.3 million	-7%	819000
Liver Cancer	854000	-8%	810000

Cancer can be prevented by eliminating or controlling some external factors such as by reducing the exposure of radiation and tobacco consumption however we can prevent cancer more effectively if the disease is diagnosed at the early stage of cancer prognosis. The following are four ways by which the cancer can be treated -

- Chemotherapy
- Radiotherapy
- Surgery and
- Immunotherapy.

The treatment process has been decided by the physician according to the stage and current condition of the cancer cells progression in the body. According to the World Health Organization (WHO), The Global Burden of Disease (GBD) Collaboration: 2015 update, around 17.5 million cancer cases have been found in worldwide and 8.7 million deaths occurred due to cancer diseases and between 2005 and 2015, cancer cases increased by 33% globally (GBD 2015 Mortality and Causes of Death Collaborators, 2015). According to GLOBOCAN 2012, the new estimate for the number of cancer patients has been found to be around 14.1 million and about 8.2 million deaths have occurred due to cancer. Besides, GLOBOCAN 2012 studies also showed that around

32.6 million people were diagnosed cancer and alive after cancer treatment (International Agency for Research on Cancer , 2013). If the number of new cancer patients and the death rate of these patients cannot be controlled at the current rate at which it has been projected to rise by 2030, the number of new cancer patients is expected to be approximately 21.4 million and the death rate of these patients to be around 13.2 million. This threatens to promote an overall aging of the population as well as will increase the child mortality rate and death from infectious disease in developing countries (Jacques Ferlay, 2010). As already discussed, different internal and external factors are responsible for the developing cancer disease along with that our daily life styles and habits are equally responsible for development of cancer – that along with our daily lifestyle choices and habits are equally responsible for causing the disease. A lesser amount of physical activity, smoking, having poor and unhealthy diet and certain reproductive factors are correspondingly liable in evolving cancer among us. These sorts of habits and lifestyles are vastly visible in the economically developed countries (American Cancer Society. Global Cancer Facts & Figures 2nd Edition, 2011). Therefore, before cancer becomes a mass burden for the huge population, patient awareness plays a large role in raising patient safety in the face of cancer.

2.2. Combination of Palliative Care Services with Oncology Care for the Cancer Patient

The development of chemotherapy was first started in the beginning of 20th century. During the World War II, it has been found that nitrogen mustard can significantly reduce the count of white blood cell. From that observation two pharmacologists Louis S. Goodman and Alfred Gilman used mustard agent in treating lymphoma and it has been seen that the patient’s tumor masses were getting significantly lower. After that the scientists come up with a solution that cytotoxic agents can be used in the treatment of cancer (Dr Ananya Mandal, 2014). Over the last 2 decades, substantial innovation and growth have occurred in evolving the different chemotherapy regimens to ensure effective treatment and prolong life for the patients with the advanced stage of cancer. Patient leading lives with the advanced stage of cancer progression require some psychological, social and physical support along with the chemotherapy and other treatment procedure. Therefore, a new term, Palliative Chemotherapy (EJ Roeland,

2016) was implemented to describe the practice of treating cancer patient. Palliative Chemotherapy is a process by which chemotherapy is given in the non-curative set up to enhance the symptoms management; such as pain, dyspnea, loss of appetite, fatigue and lack of energy etc. in addition to give emotional, spiritual support and deliver physical needs in improving the patient's quality of life (QoL) and trigger the patient's longevity of life (EJ Roeland, 2016), (Joseph A. Greer, Vicki A. Jackson, Diane E. Meier, & Jennifer S. Temel, 2013) & (ASCO Cancer.NET, 2017). While a cancer patient receives chemotherapy, this chemotherapy treatment is not enough to provide support in terms of the patient's psychological management as well as the patient's other needs. Therefore, the incorporation of palliative care alongside chemotherapy can improve the patient's quality of life (QoL) and can ensure a better chance of the patient to recover. Otherwise, depending only on chemotherapy treatment to extend the patient's life span is an unrealistic approach as it does not ensure the patient's recovery from psychosomatic agony.

According to World Health Organization (WHO), palliative care is the process of improving the patient and patient's family quality of life during their life threating illness by providing life prolonging treatment (WHO, 2018). Palliative care also mobilizes the community resources to make sure a viable and safe living atmosphere after a patient gets released from the hospital and also sustain continuity across a range of care settings (Meier DE et al., 2011). During the treatment process of a cancer patient, both patient and patient's family has to endure a large amount of mental, economic and social stresses. While patient is diagnosed at the near stages of his/her life, patient expects extra attention and care from the physician and his/her family as well. However, in the oncology day care, sometimes it becomes quite difficult to provide patient with sufficient mental and spiritual support due to have lacking on palliative care as well as a lack in the availability of both physicians and nurses as well. Therefore, researches are trying to develop a model where both palliative care and oncology care will work simultaneously in the ambulatory care settings (Joseph A. Greer, Vicki A. Jackson, Diane E. Meier, & Jennifer S. Temel, 2013). The main purposes of taking this initiative is to ensure intensive patient care and provide support to the patient by augmentation of the quality of life (QoL) of patient by relieving symptoms which are associated with cancer treatment (Joseph A. Greer, Vicki A. Jackson, Diane E. Meier, & Jennifer S. Temel, 2013) & (Meier DE & OW, 2011). Palliative care service is not only for the poor cancer prognosis patient rather it also involves the patient with localized disease as well as patient with acute lymphoma or leukemia and patient will live for years with cancer (Temel JS, 2010). Clinician who are expert in palliative care have received a comprehensive and specialized training in medical symptoms management such as pain, dyspnea, depressed mood, and nausea; and also in conveying both emotional and mystical support (Yunie Kim, 2016). Besides, palliative care team also assist cancer patient in prognostic awareness and complex treatment decision making. Finally, palliative care team also involves patient's family in different aspects of the treatment and decision making process therefore unit of care and through the patient counselling, palliative care team provide intensive support to aid the patient's family in getting rid of from the financial, social and also from the burden and distress of illness.

Now, many oncologists refer to palliative care service while some uncontrolled medical symptoms have been shown in the patient during the treatment planning. According to Bakitas M. et al. introducing palliative care with the concurrent cancer treatment has reduced the patient's symptoms burden and also improved patient's quality of life and attitude towards treatment in addition to inferior resource use over the course of the illness, particularly near the end of life (Meier DE et al., 2011) and (Bakitas M, 2009). Thus, in recent times, American Society of Clinical Oncology (ASCO) commended that concurrent palliative and oncologic care from the time of diagnosis of metastatic non-small cell lung cancer (NSCLC) should be offered and that such combined treatment should be considered for any patients with metastatic cancer early in the course of disease (Joseph A. Greer et al., 2013).

In a nutshell, to provide comprehensive patient care and to ensure patient having eminence life, more collaboration is needed between oncologist and palliative care unit (PCU) and palliative care specialist. The aforementioned references clearly demonstrate how collaboration between two parties can support patient with advance cancer in an efficient and effective way. Therefore, a mutual implementation of medical treatment involving oncological care as well as palliative care can cumulatively help the patient to combat and cope with a deadly disease such as cancer.

2.2.1. Managing Pain, Psychological and Spiritual Distress in Patient with Advance Cancer

Pain is the most common effect in patients suffering from cancer and in 70 – 80% cases it has been seen that pain is mostly associated with the patient in the advanced stage of the disease (Augusto Caraceni, 2012). During the treatment period, the patient in advanced stage of cancer experiences pain and in around 43% of cases, the cancer patient pain remains undertreated (S. Deandrea1, 2008). Therefore their quality of life gets compromised. Thus, pain management is still a prime concern to ensure the patient quality of life (QoL). Patients with advanced cancer possessing symptoms such as pain, anorexia, weakness and cachexia are often observed irrespective of the primary cancer site. However this differs in Taiwan, where 81% of advanced cancer stage patients get admitted into palliative care unit for the pain management (Chiu TY, 2000). Advanced cancer patients frequently experience both psychological and physical pain and the treatment is directed mostly to alleviate physical symptoms. Some psychosomatic factors such as depression, a fear of cataclysms and anxiety etc. are allied with severe pain (Andersen KG, 2011). Besides, there are also some psychosocial variables that are associated with pain sternness and upsurge the consumption of medications (Ya-Ping Lee, 2015). Furthermore, spiritual distress can also exacerbate equally physical & psychological symptoms of cancer patients. Thus, cancer pain is a multidimensional phenomenon and a complex subjective experience (Ya-Ping Lee, 2015). In order to manage cancer pain better, it is important to consider not only biomedical factors but also the level of psychosocial and spiritual distress of the patient (Ya-Ping Lee, 2015). An observational study held by Lee et al. in Taiwan with 237 advance cancer patients who were admitted in the National University Hospital of Taiwan between October 2006 and December 2017 in the oncology day care unit and consecutively admitted to palliative care unit revealed that their cancers were unresponsive to any form of cancer therapy. This study shows that the patients who were under the improved group expressed significantly improved psychospiritual distress and pain management than those who were not admitted to the palliative care unit. There appears to be a correlation between pain and psychological distress. Studies have shown that as pain increases, the level of psychological distress in the patient also starts to elevate simultaneously (Christine Zaza, 2002). Although pain and depression are highly prevalent in cancer patients and pain and depression should be managed simultaneously for better outcomes.

Lee et al. study revealed more than 30 % of cancer patients still have unsatisfied pain control (Ya-Ping Lee, 2015). This study also shows that demoralization and psychological distress has been found among 49.1% cancer patients in Taiwan (Ya-Ping Lee, 2015). Cancer treatment is both costly and time consuming. Sometimes, treatment runs for more than a year. Throughout the treatment time, both patient and patient's family have to bear all the treatment expenses. Patients suffering from advanced stage cancer require intensive care. Therefore, family members start to feel as though it is a burden which includes their own health problems, disruption of daily routine at home and most importantly financial difficulties. When a patient starts to feel that they have become a burden to their family, it hampers their quality of life significantly which causes severe depression and psychological distress to those who are terminally ill. Thus it makes it extremely difficult to manage both cancer pain and mental depression.

Here, the palliative care unit plays an important role in improving depression while pain is successfully controlled. While the patient's physical condition worsens steadily, only palliative and hospice care can relieve patient's fear of death and provide psychological and spiritual support to the patient (Kai-Kuen Leung, 2012). Indisputably, it can be said to ensure better quality of life and experience for the patient near the end stage of his/her life; there is no alternative to palliative and hospice care (Kai-Kuen Leung, 2012)

3. Scenario of Palliative Care in Bangladesh

A nation can achieve economic and social growth when proper health care facilities will be ensured for the every citizen. Over the last few decades, Bangladesh has attained tremendous advancements in the health and socioeconomic sector. These successes are a true reflection of the country's overall growth strategy. Recently, it has been seen that the immunization coverage has increased, infant and maternal mortality rates have declined, epidemic diseases have been eradicated and there has been an overall fall in morbidity rate (KM Mustafizur Rahman, 2017). These statistics demonstrate progress in basic health indicators in Bangladesh. To ensure better quality of healthcare for all citizens, the government has sanctioned 5.2 % of its total budget in the health sector. In 2017-18, government has proposed 20,679 crore Bangladeshi Taka which is 3,163 crore more from last fiscal year's (Palma, P, 2017). To ensure the comprehensive medical care to all citizens, the government has established 18,500 community clinics and union healthcare centers through which healthcare services are being provided to the rural people, especially to the women and children (Bangladesh Demographic Health Survey, 2011). The government has also taken necessary steps to upgrade cancer care in the country by providing modern equipment and developing a skilled manpower sector. In comparison with other Asian neighbors, Bangladesh shows extraordinary achievement in the health sector (Hossain, 2015).

Despite increasing health care development, in Bangladesh, the concept of palliative care is still negligible. But in Bangladesh only a countable number of institutions and hospitals provide palliative care facilities whereas this important issue is being ignored by most of the institutions, hospitals and clinics in Bangladesh. A collaboration study conducted in association with The National Institute of Population Research and Training (NIPORT) and BSMMU Centre for Palliative Care (CPC) published a dossier which showed that palliative care is required for 265,556 people in Bangladesh at the end of their life; nevertheless only 1070 patients are receiving palliation (Center for Palliative Care (CPC) BSMMU, 2014).

According to oncologists in Bangladesh, almost 75% of cancer patients who are appearing for treatment have low chance of survival and among them 30 – 40% of these patients have reached the end stage of their life and suffering lots of pain and physical discomfort (Center for Palliative Care (CPC) BSMMU, 2014) requiring the need for improved provision of palliative care settings. The Bangladesh Bureau of statistics has declared cancer as the sixth leading cause of death and they have anticipated that cancer will increase the morbidity and mortality rate in Bangladesh (Hussain, 2013). In 2017 The Economist published pocket world in figures 2017 and it showed that cancer-related death rates in Bangladesh in 2015 was 100,000 and by 2030, this rate is expected to increase to around 200,000 (Chandrakanth A., 2017). Every year around 200000 cancer patients are being diagnosed and around 12 to 15 lakh people are getting affected with cancer. Along with cancer, stroke is ranked in the third as one of the leading causes of patient deaths in Bangladesh (Center for Palliative Care (CPC) BSMMU, 2014). According to WHO, Bangladesh ranks 84th in terms of mortality rates due to stroke (Md. Nazmul Islam, 2012). Other causes of patient death include chronic kidney diseases such as kidney failure as well as non-communicable diseases such as Tuberculosis and HIV AIDS. A substantial number of patients also suffer from other incurable disease such as respiratory, hepatic, cardiac and neurological diseases.

Due to the unavailability of the dedicated palliative care facilities, in most cases, hospitals fail to provide advanced care to terminally ill patients. A statement delivered by The Society of Neurologists of Bangladesh state that the stroke patient yearly incidence rate is 512 per 1,000 people and among them 35% become eternally dependent on caregivers (Center for Palliative Care (CPC) BSMMU, 2014). The 2015 Quality of Death Index released by the Economist Intelligence Unit (EIU) put Bangladesh at 79 out of 80 in terms of providing end of life care needs (The Economist Intelligence Unit, 2015). For a population of 160 million, there are just a handful of foreign–trained specialists in Dhaka. The country’s health infrastructure lags behind when it comes to basic needs. Only 56 organizations are providing palliative care in Bangladesh (Raphael, 2015).

A total of 3040 inpatient beds are available for palliative patients, with both government and private resources combined, present within institutions as BSMMU, Shanti Oncology and Palliative care, Delta Medical Centre, Bangladesh Medical College Hospital, Dhaka Medical College, National Institute of Cancer and Research center, Hospice Bangladesh etc. Only 45 doctors are fully devoted, trained from abroad, and give fulltime service in different hospital and healthcare institutions (Raphael, 2015). Some oncologists and anesthetists also offer palliative care services hand in hand with their treatment services. A survey conducted by the Center for Palliative care and

National Institute of Population Research and Training (NIPORT) in six institutions that provides palliative care services on an average 8 years showed that 70% of patients' needs in the palliative care are those of cancer patients (Center for Palliative Care (CPC) BSMMU, 2014). This study also showed that averages of 100 patients are enrolled per month in palliative care and 83% institution provide 24 hours telephone and home care services among all the institutions having palliative care unit. In total 37 doctors and 30 nurses are involved in the palliative care service (Center for Palliative Care (CPC) BSMMU, 2014). Certain institutions such as Hospice Bangladesh have started offering home care services (Raphael, 2015). However, disadvantages such as lack of adequate manpower and other resources tend to limit the degree of service provided by these institutions. It is the only center in Bangladesh which provides 24 hour support for end of life care at homes for patients (Kabir, 2015). Palliative care service is delivered globally in a diverse range of settings which focus on giving the patient specialty care. On the other hand, the service still remains on the most basic level in Bangladesh. Also, there is different level of understanding between different institutions in Bangladesh who are providing palliative care services.

In 2006, Bangladeshi researchers raised concern for inadequate medical use of opioids in Bangladesh (Center for Palliative Care (CPC) BSMMU, 2014). The study also reported that the barriers of opioid use in Bangladesh include inadequate dose, interrupted drug supply, legal restrictions and the unavailability of immediate release morphine. Doctors across Bangladesh are apprehensive about the use of morphine for patient care. The amount of analgesics required for pain management is inadequate and requires major reforms in terms of national legislation, number of manufacturing units around the country and dissemination of knowledge among health professionals about the administration of opioid analgesics. Bangladesh is in the 160th position in morphine consumption in the world according to the International Narcotic Control Board (INCB, 2013). In 2013, Morphine consumption in Bangladesh was 0.05 mg/capita whereas the global consumption of morphine is 6mg/capita (INCB, 2013). These numbers reflect the miserable condition of pain management for the multitude of patients with end stage disease. Teaching medical graduates about adequate pain management is just as important. The International Association for the Study of Pain (IASP) identified an important barrier to pain management to be that the study of pain is not well integrated into the medical curriculum. In Bangladesh, physicians often choose pethidine over morphine for cancer pain. Khan et al. in his study showed that around 57% physicians in Bangladesh has preferred to use pethidine instead of opioid to pain management as pethidine causes less harmful side effects amongst all the opioid (Center for Palliative Care (CPC) BSMMU, 2014). Often doctors have very little choice to do otherwise due to the lack of availability of morphine. Because pethidine is a short acting opioid and capable of producing toxic metabolites; WHO has restricted the use of pethidine while simultaneously advocating the use of morphine for chronic pain relief (WHO, 1990).

The growth and appraisal of palliative and hospice care services should come from the mutual efforts of both the government, private and non-government sectors as well. Without having any community involvement, it is quite impossible to establish the concept of palliative care in Bangladesh. Besides, lack of having adequate pain medication is also one of the major impairments in effective palliation in Bangladesh. This fact should not be overlooked and it needed to implement specialists' facilities which are dealing in palliative care because this is the only sector which can provide support to a big proportion of the total number of patients with incurable, progressive diseases.

3.1. Education on Palliative Care and Palliative Medicine

In both undergraduate and postgraduate medical and nursing curriculum there is no mention of a course that specially focuses on the palliative care. Nursing curriculum consists of a three years diploma and four years of bachelor program but it is not called palliative nursing. The perception of medical students towards palliative care can be changed through education and at this end, educational intervention can create awareness, attitude changes, enhancement of knowledge and skill and most importantly will change the behavior of physician towards palliative care. (Wilson JF,1992). In Bangladesh palliative care is neither included in medical and nursing curriculum and therefore, most of the physicians are not aware of the importance of the palliative care and palliative medicine. A conceptual prevalence study conducted in Bangladesh among 127 physicians to find out the insight and understanding in palliative care between the post graduate trainees and their trainers in the university and also to identify if there is any dissimilarity between the two groups and this study showed that half of this sample group has their lack of confidence in prescribing oral morphine in cancer pain management and the ration between trainee and trainers are 55% and 69% (Nezam Uddin Ahmad, 2009). Through this study, Ahmed U. N et al. showed that the fresh graduate and post graduate medical students have more knowledge and clear perception on palliative care where as their trainers point of view regarding palliative care was still at the basic level. This study clearly demonstrates that in Bangladesh even physicians does not have clear vision on the palliative care. Recently, BSMMU has introduced a 5 year residency program in palliative medicine which is under the evaluation of university. To design the curriculum for this residency MD course, they have adopted and included the curriculum from the developed and developing world has been liberally consulted. Local palliative physicians, twenty-nine senior internal faculties from BSMMU, external faculties from overseas and one external observer with vast experiences in the field of palliative medicine have formulated the curriculum for MD residency program in palliative medicine. This initiative has been supported by the Higher Education Quality Enhancement Program (HEQEP) of University Grant Commission (UGC) of Bangladesh.

3.2. Training on Palliative Care to the Healthcare Professionals

The first medical university based palliative care in Bangladesh was started in Bangabandhu Sheikh Mujib Medical University (BSMMU) in 2007 and in 2011 the Center for Palliative Care (CPC) was established to take the pioneer role in the palliative care medicine. Since their inception, this center is providing palliative support to different patients specially cancer patients who require palliative care support. Patients who needs palliative care support have a treatment process different from that of the conventional treatment procedure. Therefore, physicians are required to adopt special skills to manage the treatment of those patients. The Center for Palliative Care (CPC) offers few training courses on palliative care which includes short and intermediate courses. Short term courses are multi professional educational courses whereas intermediate courses are six weeks basic certificate courses designed for physicians and nurse. There is also six weeks course which is specifically designed for the palliative care assistants. For this assistant course, the participants' educational quality required up to SSC or equivalent certificate to enroll in this in service course.

The following courses are offered by CPC (Center for Palliative Care (CPC) BSMMU, 2014):

1. Basic Certificate course in Palliative Care for Doctors (BCCPM) and Nurse (BCCPN) – duration 6 weeks
2. Introductory courses for complementary medicine such as Homeopathic, Unani and Ayurvedic – duration 3 days
3. Introductory course for doctors and nurse – duration 3 days
4. Training for palliative care assistants – duration 6 months &
5. Introductory course for community volunteers – duration 3 days
6. Introductory course for patient's family members – duration 3 days
7. Foundation course for postgraduate doctors – duration 7 day up to 1 month. It depends upon the patients discipline's time table

To ensure a comprehensive palliative care service to the all terminally ill patients, the physician, nurse and palliative care assistant need to have training on palliative care and palliative medicine and there is no alternate of that. However, according to the NIPORT and CPC study, by following their survey outcome they have seen a positive feedback and enthusiasm between physician and nurse regarding palliative care training.

3.2.1. Training to Palliative Care Personnel

Patients who are in incurable life threating condition always require intensive palliative care service and the patient will be benefitted more if the patient receives palliative service through trained and expert palliative care professionals. In Bangladesh, there is still a huge amount of people who live in the urban area where sufficient healthcare facilities are unavailable. However, Bangladesh has accomplished outstanding successes in healthcare service by utilizing the innovative idea of involving trained community based health workers to support people on specific disease surveillance. Following this concept, Center for Palliative Care (CPC) has also started to train individuals who have school and high school level of education. This training is named as Palliative Care Assistant Training. The objective of this training course is after completing the training course; the personnel will go back to the community and take care of the basic needs of his/her community to the patients who needs palliative support. Dr. Nezamuddin, Professor in Palliative medicine, BSMMU states that they have started community palliative care service in Korail slum where they chose a person as a volunteer whom they have trained regarding the palliative care service and also send him/her back to the slum again to provide the service if any terminally ill patients are found over there. This project is, however, still in the initial stage. Dr. Nezamuddin also mentioned that they a plan to start in a bigger scale is in motion and opted to go for a collaborative work with different public health schools (JPG Public Health) and NGOs. Palliative Care Assistant (PCA) training is the way which makes the availability of the palliative service at lower cost to the patients and their families. PCA training could be undertaken by the DGHS or the community health worker training in the NIPORT may integrate it to their training curriculum.

4. Methodology

4.1. Research Objective and Goal

The primary objective of this study is gain an understanding of the overall situation of palliative care in Bangladesh. With this in mind, the main research goal is to identify the scope of developing palliative care in Bangladesh, the extent to which terminally ill patients (especially cancer patients) are receiving palliative in Bangladesh and also to find out the scope to develop the concept of palliative care in Bangladesh.

4.2. Research Design and Methods

Secondary data for this research was compiled from several palliative care related journals, several of which are recognizable, such as The New England Journal of Medicine, BMC Palliative Care, A Cancer Journal for Clinician, Journal of Palliative Medicine, National Institute of Health, Journal of Clinical Oncology, The Journal of American Medical Association (JMA) and other distinguish academia, relevant articles and websites such as World Health Organization (WHO), National Institute of Population Research and Training (NIPORT), Center for Palliative Care (CPC) International Narcotic Control Board (INCB) and other guidelines. All the data and information were collected and referenced accurately and the information was then compiled to get a general overview of palliative care in Bangladesh related to the practice being carried out around the world. In addition, attempts were taken to detect any gaps or misleading information that may have been present within the literature.

Primary data was first obtained by designing a comprehensive questionnaire based survey. The survey targeted renowned oncologists and physicians from various hospitals and palliative care centers within Dhaka city. The questionnaire was tailored to address a number of queries regarding the current status of palliative care services within respective hospital and palliative care centers. The survey was presented to the administrative authorities of around 14 hospitals, out of which 40 oncologists and physicians with expertise knowledge on palliative care were referred to. The questionnaire consisted of multiple choice and open ended questions, with each question aimed to measure each respondent's attitude towards the topic. Physicians and oncologists were required to answer all the multiple choice questions but had the freedom to answer as many open ended questions as they pleased. A total of 25 questionnaires were filled out by oncologists and physicians from different institutions. All the respondents and hospital administration were officially informed before the survey was conducted within the hospital and palliative care center. Data collected from the survey was kept authentic by constant supervision from the survey taker and none of the respondents were allowed to have the access to the secondary information sources during the course of the survey.

Data collected from both primary and secondary resources were compiled and analyzed before adding data into the study. Data collected from survey questionnaire was analyzed and construed by both qualitative and quantitative analysis. Based on our research hypothesis, we constructed our research questions (RQ) and related research objectives (RO).

4.3. Research Hypothesis

There is an urgent need for palliative care in Dhaka

4.4. Research Questions

RQ1: What is the current status of palliative care in Bangladesh?

- RO1: Categorize the types of hospital having palliative care services
- RO2: Identify which category of hospitals offer palliative care services or have a palliative care unit
- RO3: Investigate the availability of child palliative care services
- RO4: Investigate whether the palliative care center/unit has been operational for 12 full months
- RO5: Investigate if the palliative care of a hospital stands alone or not
- RO6: Investigate the types of collaboration between palliative care center/units and different service providers
- RO7: Identify the number of patient encounters per month for palliative care
- RO8: Investigate if patient and family satisfaction is measured and recorded

RQ2: What benefits do palliative care services offer to the patients?

- RO1: Identify the services offered by the palliative care units or hospitals in Bangladesh
- RO2: Identify the availability of Electronic Health Record (EHR) system in palliative care unit/hospitals
- RO3: Investigate the availability of special screening criteria to identify patients with palliative care needs
- RO4: Identify whether the Electronic Health Record (EHR) utilized by certain hospitals is capable of generating automatic consultant requests
- RO5: Investigate the availability of telemedicine service facilities

RQ3: How can palliative care be developed or improved in Bangladesh?

- RO1: Identify the reasons behind the absence of palliative care in certain hospitals in Bangladesh and how this problem can be solved
- RO2: Investigate where the patients are recommended to go if the respective hospital does not have palliative care service/unit
- RO3: Identify the essentiality of palliative care in Bangladesh
- RO4: Identify the necessity of the involvement of governmental help in establishing well-developed palliative care center/unit

5. Results

RQ1: What is the current status of palliative care in Bangladesh?

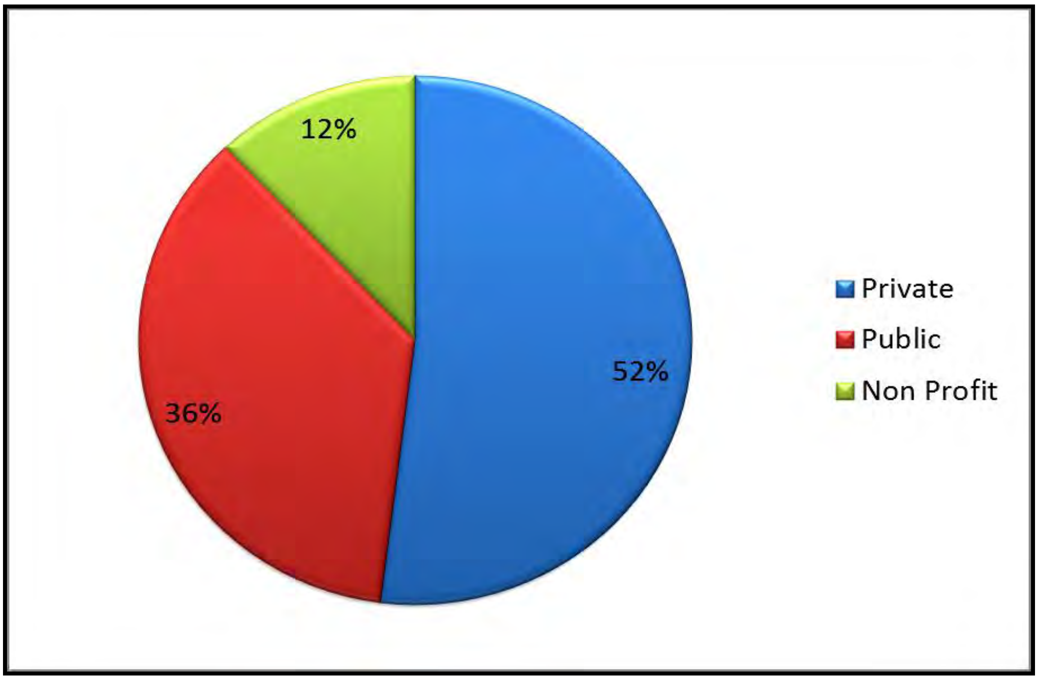

Figure 5.1: Proportion of hospitals based on ownership

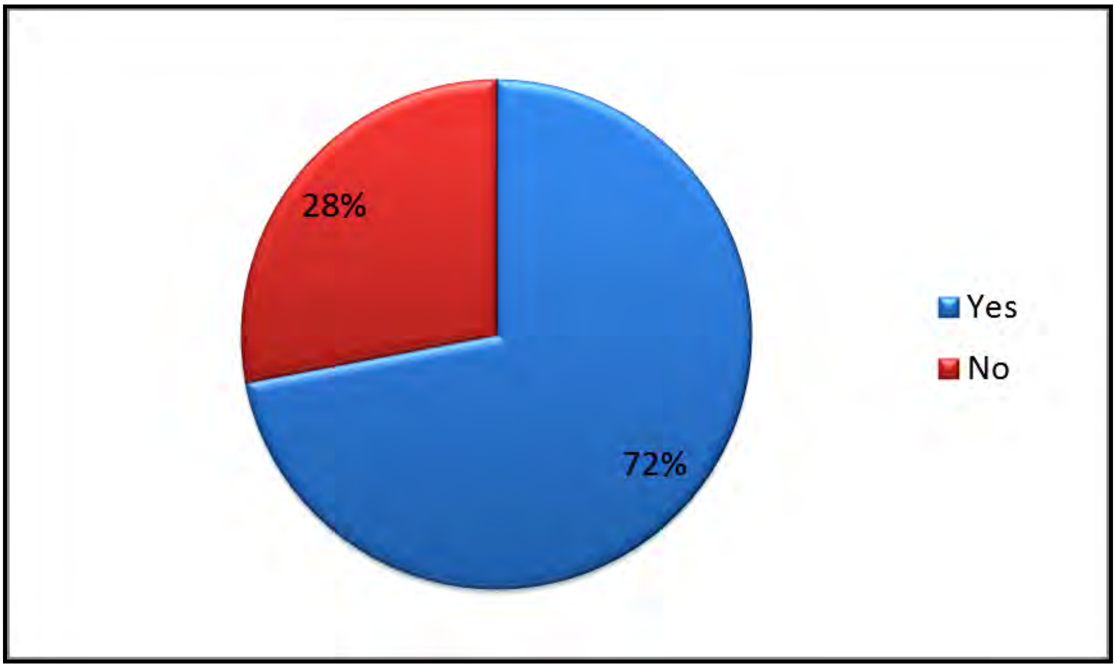

Figure 5.2: Proportion of hospitals providing palliative care services

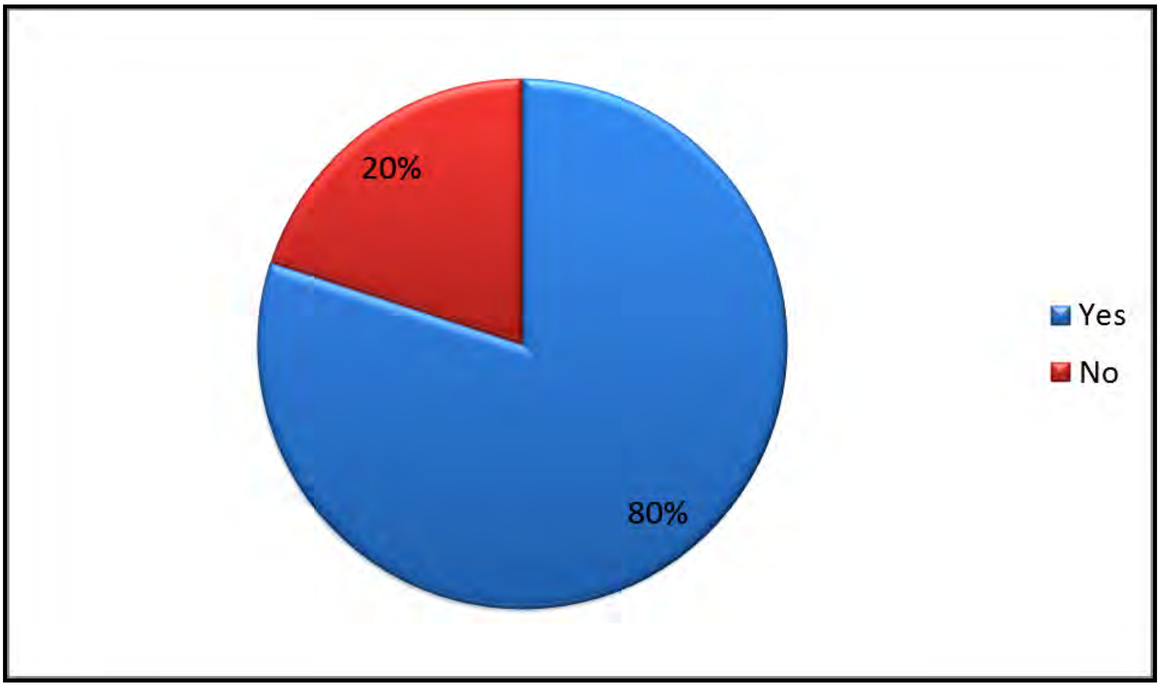

Figure 5.3: Percentage of hospitals serving child palliative care

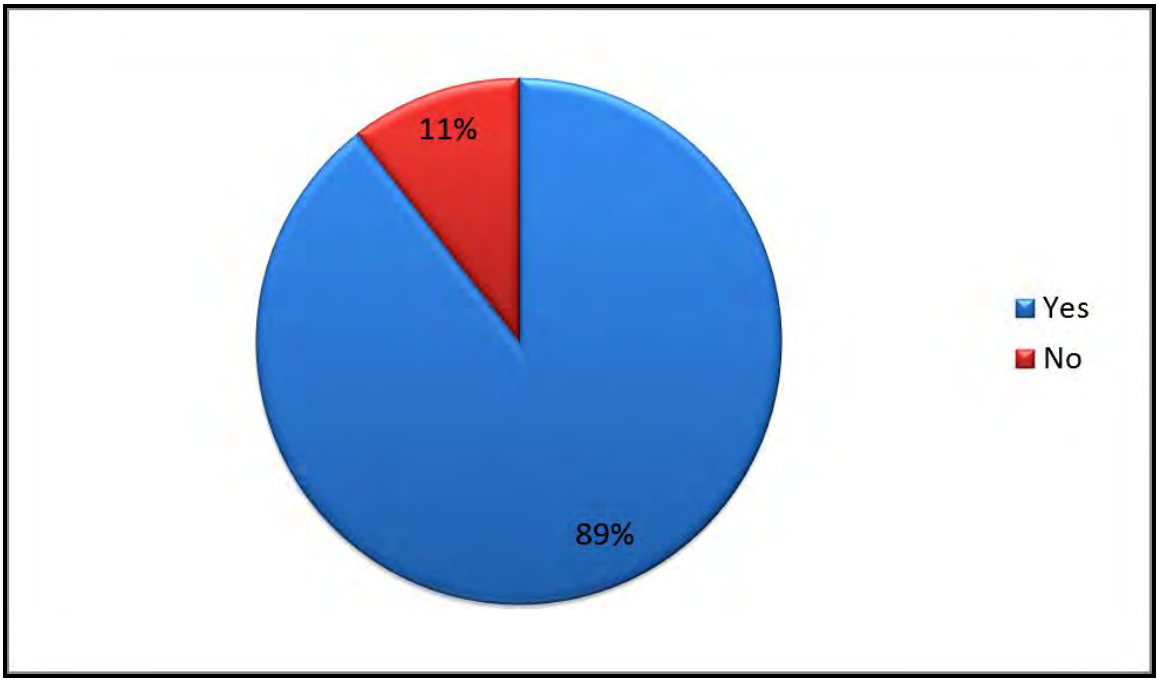

Figure 5.4: Proportion of hospitals providing palliative care services throughout the year

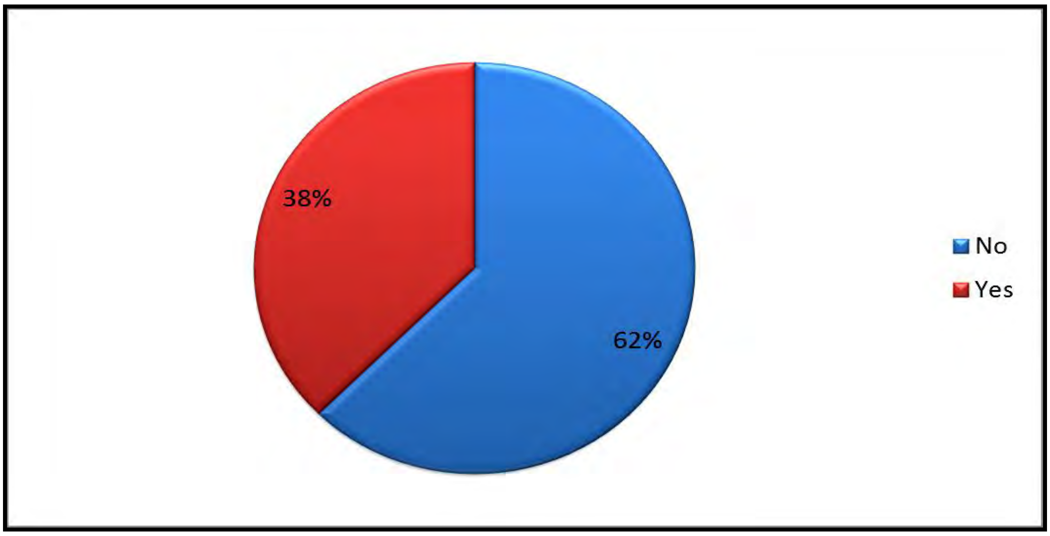

Figure 5.5: Percentage of palliative care units operating alone

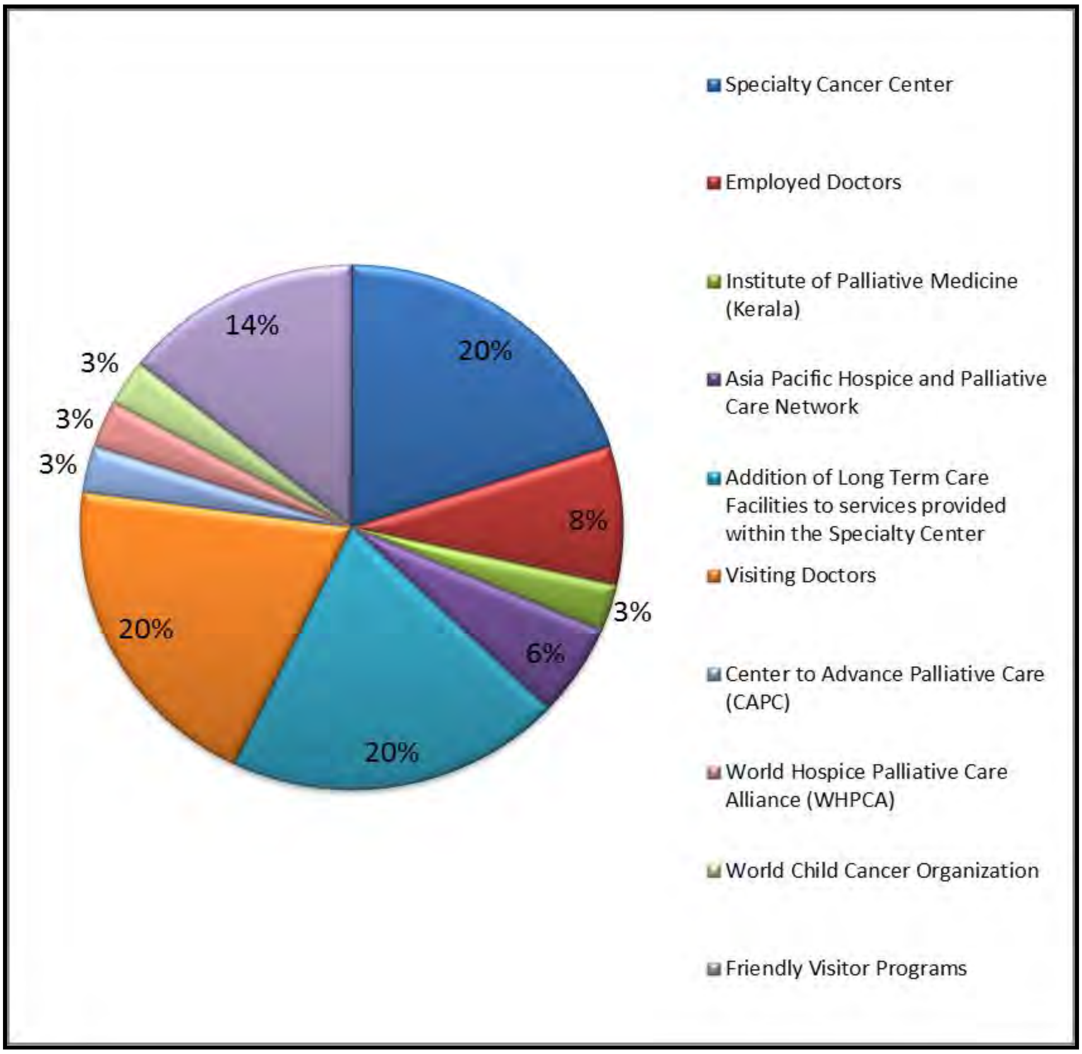

Figure 5.6: Percentage of service providers' work in collaboration with the palliative care unit

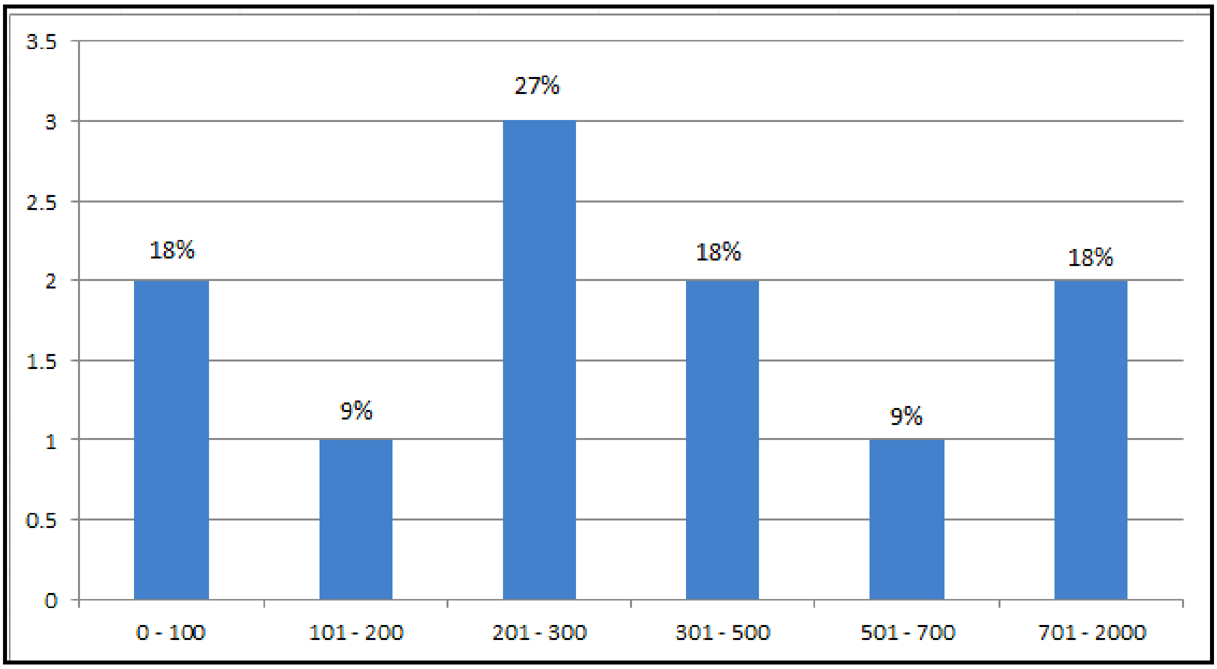

Figure 5.7: Average percentage of patient encounters per month

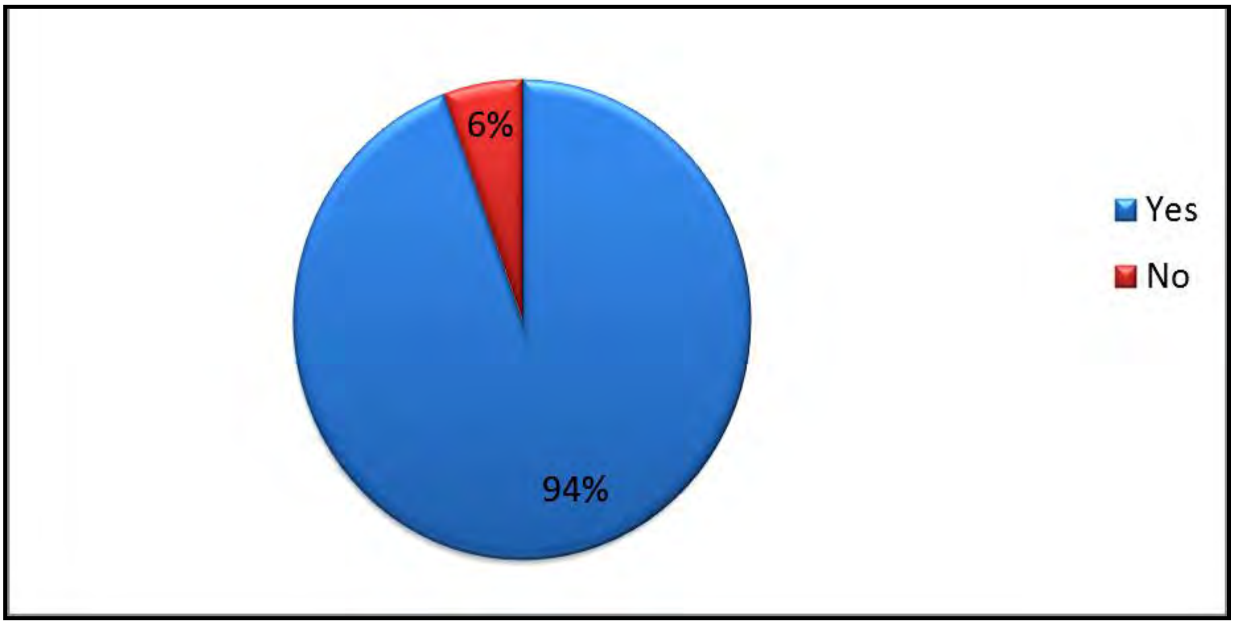

Figure 5.8: Percentage of hospitals conducting family satisfaction surveys

RQ2: What benefits do palliative care services offer to the patients?

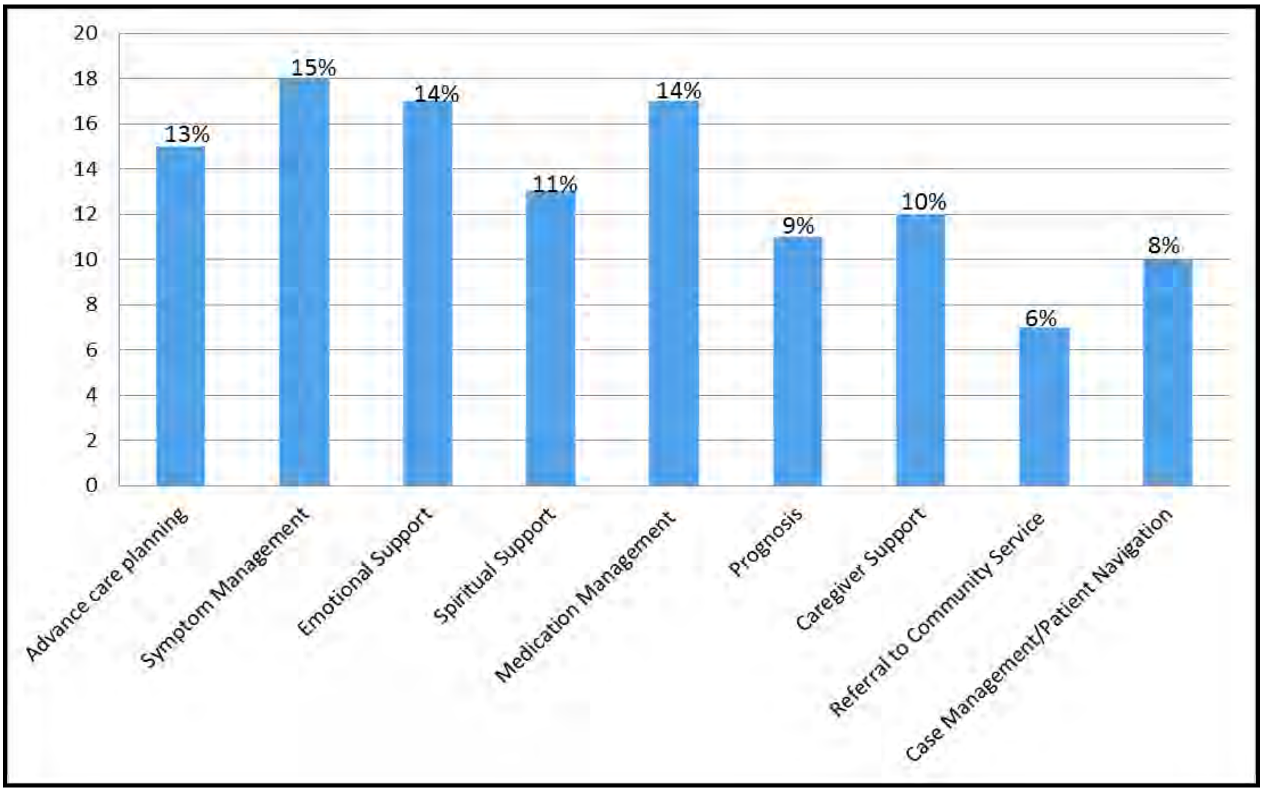

Figure 5.9: Benefits obtained by patients from palliative care unit

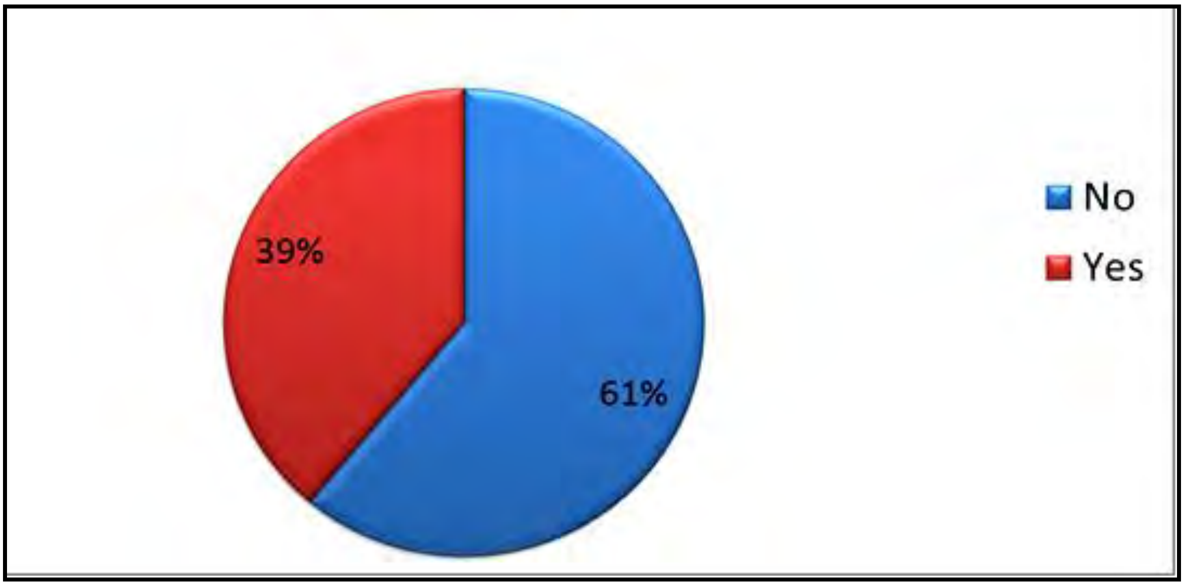

Figure 5.10: Percentage of hospitals using Electronic Health Record (EHR)

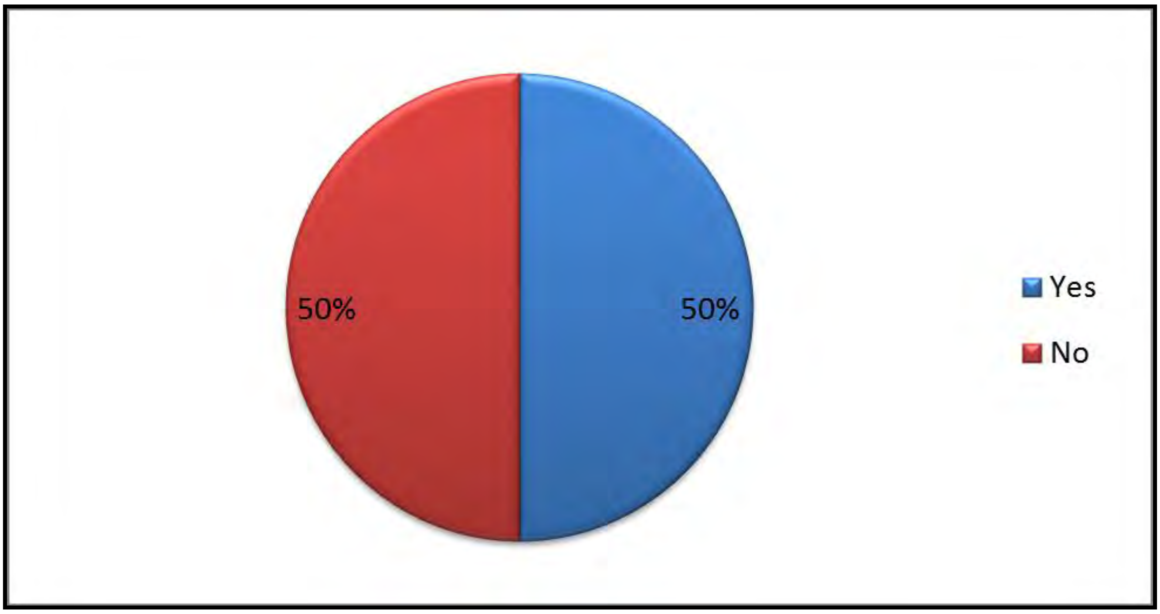

Figure 5.11: Percentage of hospitals having standardized screening criteria to identify patients with palliative care needs

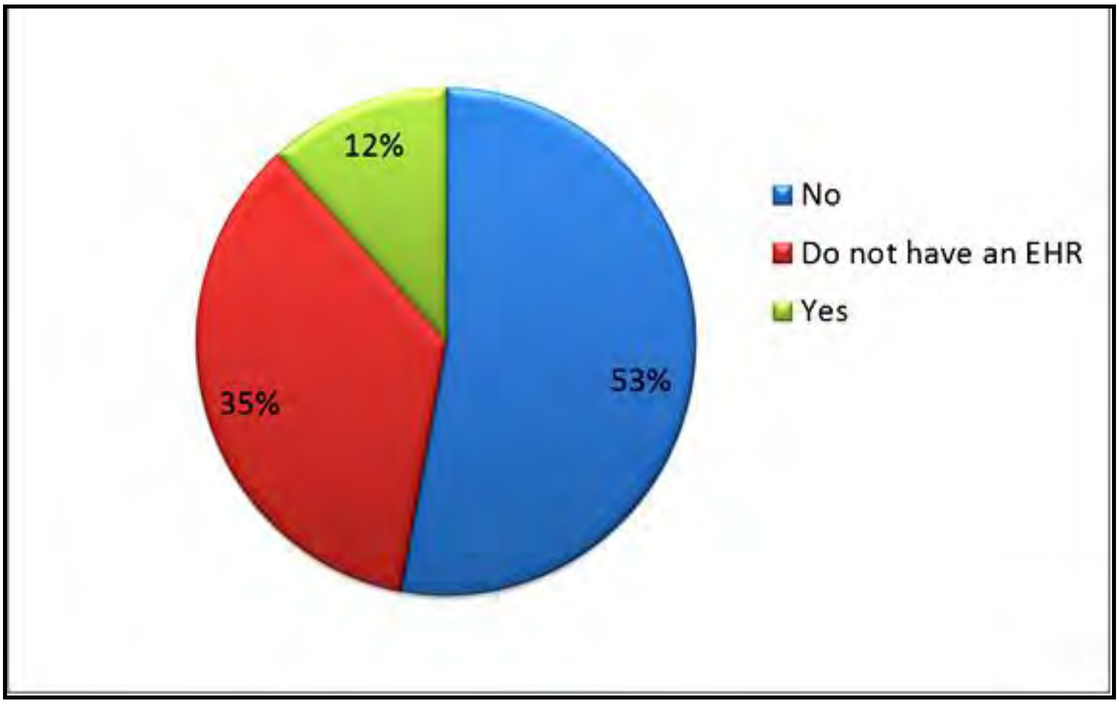

Figure 5.12: Percentage of hospitals using Electronic Health Record (EHR) in the patient screening process

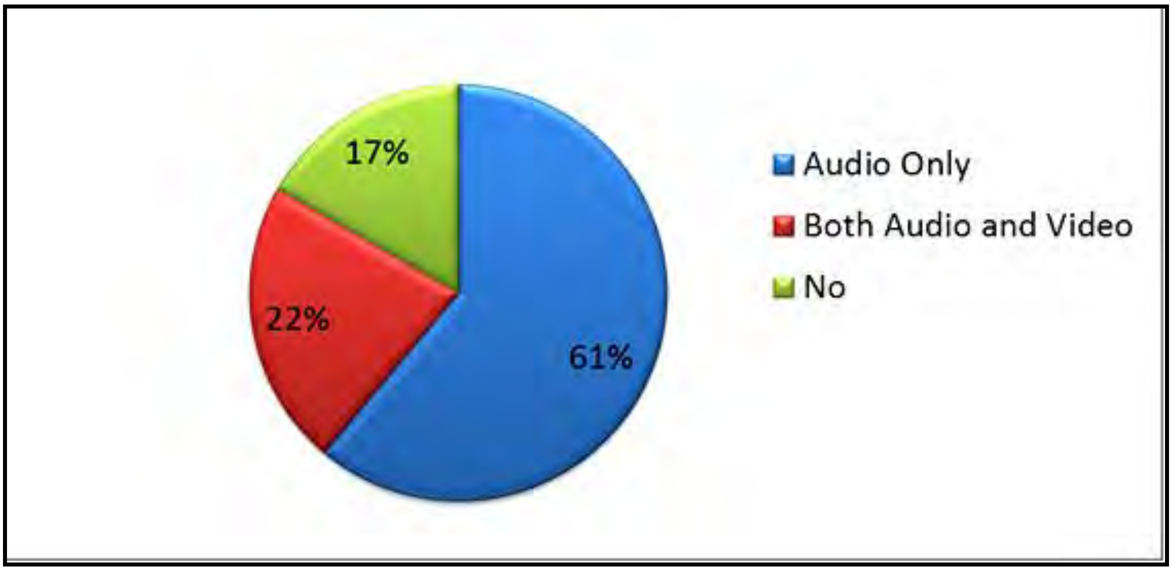

Figure 5.13: Percentage of hospitals which provide telemedicine service

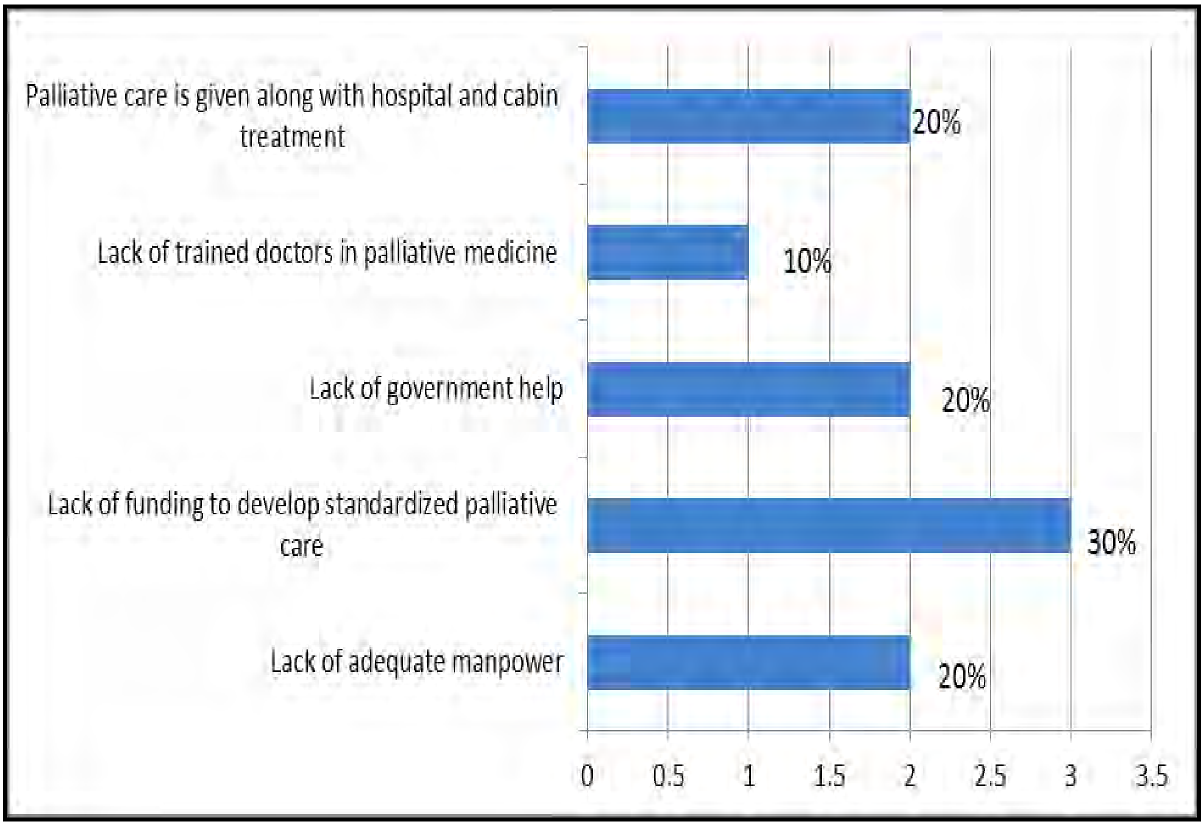

Figure 5.14: Reasons for the absence of an individual palliative care unit

RQ3: How can palliative care be developed or improved in Bangladesh?

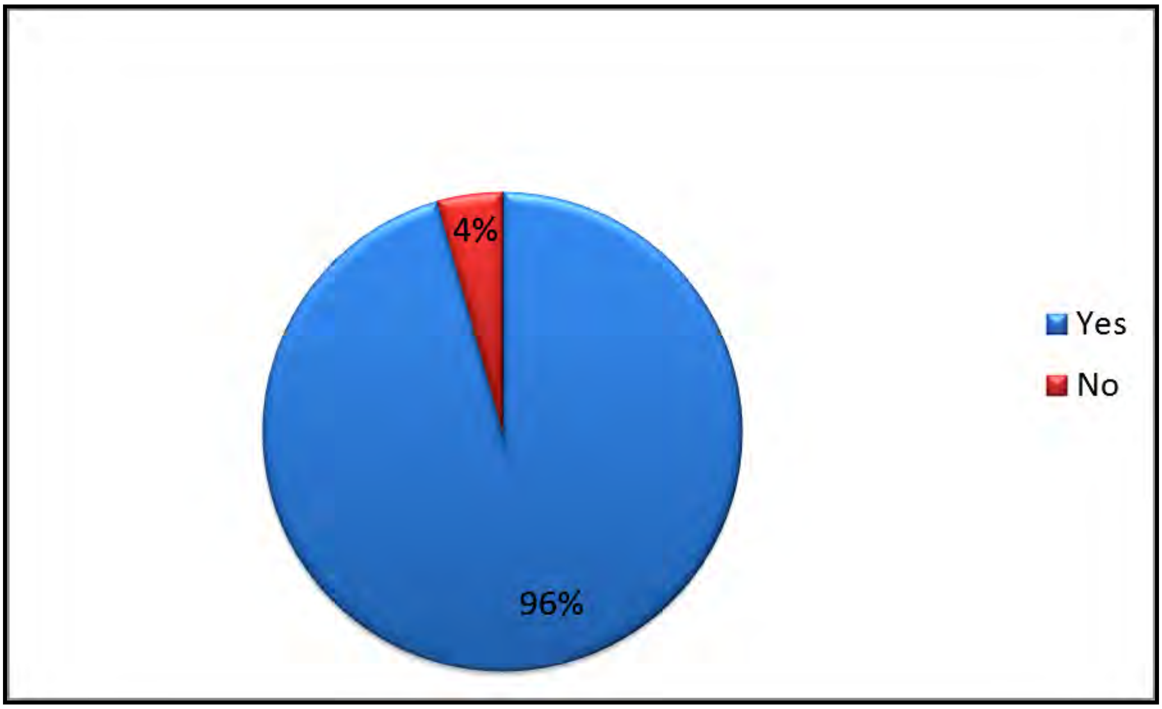

Figure 5.15: Percentage of physicians interacting with patients needing palliative care services

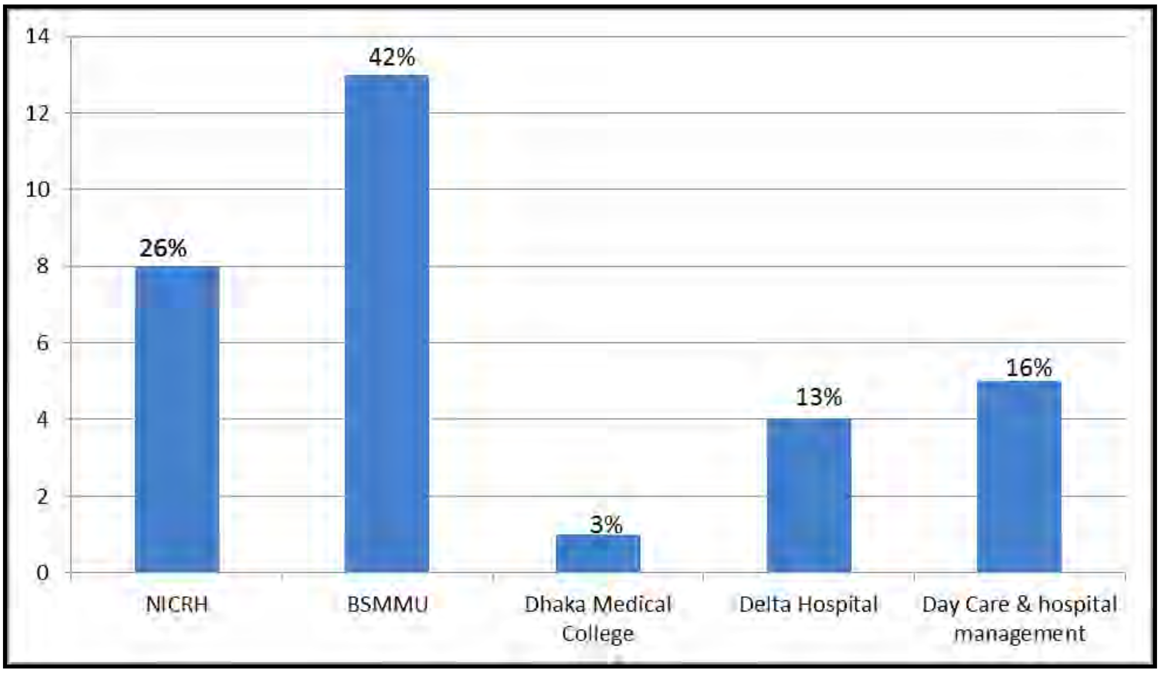

Figure 5.16: Hospitals where patients are referred to for palliative care

6. Discussion

While this survey initially targeted all cancer hospitals located within Dhaka city, certain limitations restricted the sample size to fourteen popular cancer hospitals present inner city. The first limitation was time constraints for which the numbers of targeted hospitals were reduced in order to ensure proper collection and accurate analysis of data. The second limitation was the inaccessibility to information by certain hospitals whose hospital management or authority had refused permission to conduct the survey within their premises. Another limitation was the inability of several referred physicians to participate in the survey as they were unable to manage enough time to take part in the survey.

Out of the hundred physicians in the target group, twenty five physicians were able to provide their valuable input for the survey. Among the twenty five physicians who responded to this survey, 13 (52%) of them were from private hospitals, 9 (36%) were from public and 3 (12%) were from non-profit hospitals (Figure 5.1). Among all the responses, 18 (72%) physicians responded that palliative care is present in their respective hospitals and 7 (28%) responded negative (Figure 5.2). Additional data was found (Figure 5.3) from the positive responses regarding the presence of child palliative care on which 80% responded positive and 20% responded that they do not have any child palliative care in their respective hospitals. 89% of them also mentioned that their hospitals offer palliative care service to the patients throughout the year whereas 11% responded that they only offer it when the patients enroll with palliative care needs (Figure 5.4). Also, 62% referred to their respective hospitals having palliative care unit with the collaboration of different service providers (Table 6.2).

Among 25 doctors, 11 provided information with regard to the average number of patient encounters (for palliative care) per month (Table 6.3). 94% of them also informed that, they conduct a program to evaluate patient and family satisfaction through survey, on the other hand 6% responded negative (Figure 5.7).

Table 6.1: Percentage of service providers' work in collaboration with the palliative care unit

Name of service providers	Percentages (%)
Specialty Cancer Center	20%
Employed Doctors	8%
Institute of Palliative Medicine (Kerala)	3%
Asia Pacific Hospice and Palliative Care Network (APHPCN)	6%
Addition of Long Term Care Facilities to services provided within the Specialty Center	20%
Center to Advance Palliative Care (CAPC)	3%
Worldwide Hospice Palliative Care Alliance (WHPCA)	3%
World Child Cancer Organization	3%
Friendly Visitor Programs	14%
Visiting Doctors	20%

Table 6.2: Average percentage of patient encounters (for palliative care) per month

No. of patients	No. of responses
0 - 100	2
101 - 200	1
201 - 300	3
301 - 500	2
501 - 700	1
701 - 2000	2

From this survey study, it was found that, the following benefits are offered to patients with palliative care needs in Bangladesh (Table 6.4).

Table 6.3: Benefits obtained by patients from palliative care unit

Benefits	Percentages (%)
Advance care planning	13%
Symptom Management	15%
Emotional Support	14%
Spiritual Support	11%
Medication Management	14%
Prognosis	9%
Caregiver Support	10%
Referral to Community Service	6%
Case Management/Patient Navigation	8%

Physicians were asked whether their palliative care center/unit use Electronic Health Record (EHR) system to maintain the patient data such as disease status, diagnosis report etc. in any software system and 61% said that they use Electronic Health Record (EHR) whereas 39% do not (Figure 5.10). They were also asked about the availability of standardized screening criteria to identify patients with palliative care needs where half of them responded positive and the rest half responded negative (Figure 5.11), moving on only 12% respondent mention that their EHR is capable of generating automatic consult request on the basis of screening of the patients for palliative care needs (Figure 5.12).

With regard to the availability of telemedicine facilities within the individual palliative care units, doctors taking the survey revealed that (Figure 5.13) 61% of hospitals have audio service only, 22% have both audio and video services and 17% do not have any telemedicine facility.

Another objective of this survey study was to identify the reasons behind the absence of palliative care in certain hospitals in Bangladesh and how this problem can be solved. Following that question physicians mentioned following reasons for the absence of palliative care within their hospitals (Table 6.4).

Table 6.4: Reasons for the absence of an individual palliative care unit

Reasons	Percentages (%)
Lack of adequate manpower	20%
Lack of funding to develop standardized palliative care	30%
Lack of government help	20%
Lack of trained doctors in palliative medicine	10%
Palliative care is given along with hospital and cabin treatment	20%

Doctors, who lacked palliative care facilities within their respective hospitals, were asked about the essentiality of palliative care service and also the need of the government help to establish a well-developed palliative care service where all of them responded positively.

In the final part of this survey study, physicians who lacked palliative care services within their hospitals were asked whether they have ever found any patient who requires palliative care and 96% responded positive (Figure 5.16). They were also asked about which hospitals they would recommended for patients to go to for palliative care service, and they have mentioned the following hospitals' names (Table 6.5).

Table 6.5: Hospitals where patients are referred to for palliative care

Name of the hospitals	Percentages (%)
NICRH	26%
BSMMU	42%
Dhaka Medical College	3%
Delta Hospital	13%
Day Care & hospital management	16%

7. Conclusion

According to the World Health Organization, around 59% of deaths in Bangladesh are caused by non-communicable diseases (NCD), out of which 10% are caused by cancer (Chaity et al. 2017). It is also believed by the oncologists in Bangladesh that there are currently around 1.5 million cancer patients in Bangladesh. Out of this number, around 250,000 people have been diagnosed with cancer while 150,000 patients die from cancer every year (Chaity et al. 2017). From this survey study it could be said that, the major problem behind the lack of palliative care services in Bangladesh stems from both the demand and supply ends. Furthermore, local health practitioners' lack of adequate education and training in palliative care, in some essential pain medicine use and in symptom management skill are the main causes of suffering for the patients. The last few years have seen the mainstream global health policy to be more prevention and cure oriented, paired with high technology development whereas in Bangladesh it is not being used properly. This calls for a strong promotion of local awareness regarding the urgent need of palliative care units in both public and private hospitals, in response to the poor figures in the current scenario. Furthermore, greater effort needs to be taken to introduce more palliative facilities for patients in cancer units in order to manage and/or mitigate their pain and suffering. For a resource constrained country like Bangladesh, palliative care is not an option, but an obligation. To develop the palliative care in Bangladesh, it is highly recommended to develop policy and guidelines for palliative care in the national level. Besides, it is also essential to upgrade national opioid control policy as well as upgrade and expend the palliative care education, training and certification program in harmony with the national guiding principle.

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