An Assessment of Essential Palliative Care Health Services in Namibia

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Abstract

The rise in prevalence of health conditions such as Non-Communicable Diseases particularly in most African countries reveals the significant need for introducing the Palliative Care services in a National Health System. The study aimed at determining the proportion of physical infrastructure and resources available for the provision of palliative care services to patients in need at the healthcare facilities of Ohangwena and Khomas regions, Namibia.

Although the healthcare facilities indicated having sufficient equipment, most (66.7%) displayed lack of mobility equipment, such as patient hoist, wheel chairs and pain medications such as morphine. There was statistical significant difference in the proportion of morphine availability between peripheral region and central region healthcare facilities ($p<0.005$. The study concluded that while the healthcare facilities showed some available resources, crucial resources such as patient hoist and morphine medications are needed to improve the quality of holistic palliative care services in the Namibian public health system.

Key Words: Palliative care, facility, resources, Khomas region, Ohangwena region.

1. Introduction

The rising prevalence of numerous health conditions such as Non -Communicable Diseases (NCDs) in the world particularly in most of the African countries reveals the significant need for introducing the palliative care services in a national health system.

According to [1] nearly 23 percent of the deaths in Africa are the result of chronic diseases such as cancer and HIV/AIDS. Almost 10.9 million Africans perish due to chronic diseases each year, with a projected 28 million dying from chronic diseases between 2005 and 2015 [2]. There is an increasing demand of palliative care due to the rise of non-communicable diseases such as cancer [3]. The global situation highlighted is similarly reflected in Namibia where, for the past five years, the country has seen an increase in the trend of morbidity due to chronic communicable and non-communicable diseases that may necessitate palliative care [4].

The effective provision of palliative care requires a public health approach according to the key pillars of palliative care, that are; appropriate government policies; adequate palliative care resource such as drug availability; education of policy makers, health care professionals and the implementation of palliative care services at all levels throughout the society [2] See (figure 1).

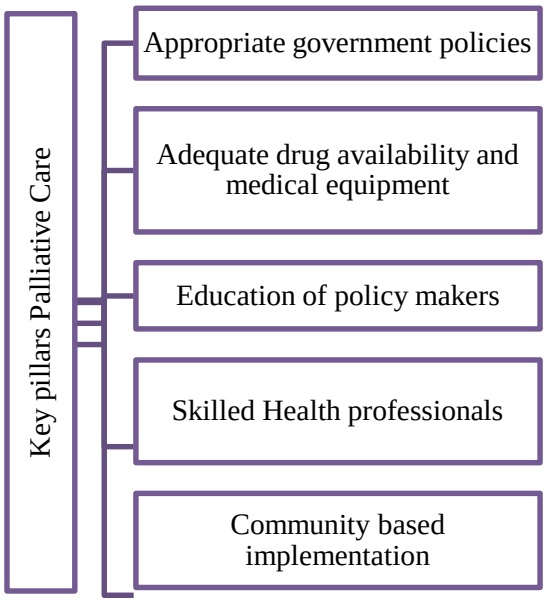

Figure 1. Key pillars of Palliative care services adapted from APCA 2014.

The key pillars indicate the criteria standards by which palliative care services can be assessed. In the absence of the key palliative care provision, patients and their families endured more suffering

that complicate the quality of life. It is therefore imperative that the public health system be well prepared with conducive infrastructures and necessary suppliers to alleviate patients suffering.

Previous palliative care studies identified gaps in the provision of optimal palliative care as a result of inadequate infrastructures and resources necessary for the provision of palliative care to patients suffering from life-limiting illnesses. Similarly, a study on morphine consumption indicated that, most African regions does not meet the actual morphine needs for patients in pain. Developing countries only accounted for 6% of global opioid consumption which is low, irrespective of the improved access to pain treatment over the years [6].Improved pain management services has been advocated in palliative care settings to alleviate suffering [7].The unavailability of morphine in palliative care settings implicate the wellbeing of patients. In the same way, internationally, studies on palliative care indicated discrepancies in services provision as well as limited resources for patients suffering from life-limiting illnesses. Those studies indicated a 20% proportion of patients who reported a need for pain management to overcome symptoms in palliative care. [8; 9]. Equally, weak health systems and inadequate trainings of health care providers as well as inadequate drug treatment for pain were noted in sub-Saharan Africa [10; 11].

In Namibia, patients with life limiting illness indicated some limitations on pain medications and antiretroviral drugs whereby (44%) need pain relief medication, and 43% are in need of other symptom management [12;13]. Despite reports on the circumstances of patients with life limiting illness, there was no sufficient documented evidence on the actual proportion of available palliative care resources for needy patients such as medical suppliers, medical equipment and medications for palliative care services at Ohangwena and Khomas regions.

2. Objective of the study

This study aimed to determine the actual proportion of palliative care resources such as medical supplies, equipment, services and medication for the implementation of palliative care services in the two regions in Namibia at health facilities levels in comparison to one of the key pillars of palliative care as recommended by WHO [5]. This key pillar of the palliative care stated physical infrastructure with adequate essential resources such palliative care services, medical equipment, medical suppliers, and adequate drug availability for palliative care. The findings from the study may inform facility management on the status of available resources for palliative care services. Equally, the findings may assist policy makers at planning level to ensure equitable resource distribution among healthcare facilities at the respective regions.

3. Materials and Methods

A cross sectional study using quantitative approach was conducted. The study was conducted among the public healthcare facilities of Ohangwena and Khomas regions who provide in-patient services. The study population was all six in- patient healthcare facilities at Ohangwena and Khomas regions. The six healthcare facilities constituted the sample frame.

Sample size: Calculation was done as follows:

$$\mathbf{n} = \frac{N}{1+N\,e\text{^}2}$$

n = sample size

Where N = population size

e = margin of error

$$\mathbf{n} = \frac{6}{1+6 * 0.05\text{^}2}$$

$$= \mathbf{n} = \frac{6}{1+0.015}$$

=5.91

= 6

Based on the sampling technique and considering that this study aimed to determine the proportion of palliative care resources such as medical suppliers, medical equipment and medications for implementing the palliative care services in Ohangwena and Khomas Regions, the researchers considered including all the existing six healthcare facilities in the two regions. A structured data collection checklist with closed ended questions was developed in English. The tool included the indicators related to medical suppliers, medical equipment, and medications for palliative care. The researcher collected the data at the healthcare facilities, over the period of five days. Data were analysed using statistical package for social science (SPSS) version 24. Data was then presented in tables and graphs. Inferential statistics such as the Chi-square test were used to compare any differences in proportions between regional healthcare facilities on availability of palliative care resources. A p-value < 0.05 for all analysis was considered to be statistical significant.

The research instrument was validated with experts in the field and was pilot tested to determine the ability to obtain similar results. The measuring instrument contained valid variables that measures the available physical infrastructures, drugs and medical equipment for palliative care. A pilot survey was conducted in Oshana region, which did not form part of the selected regions for this study. All in- patient healthcare facilities in Khomas and Ohangwena regions were assessed excluding the primary healthcare facilities. Permission to conduct the study was granted by the research committee of Texila American University as well as by the permanent secretary of the Ministry of Health and Social Services (MoHSS) of Namibia to conduct the study at public health facilities. Consent to collect data, was given by facility managers. All documents and tools with data were locked in a locker and a computer password was used to ensure confidentiality of data.

4. Results

Six healthcare facilities were assessed for the year 2016 to determine their proportions of possessing palliative care resources, of which 3 (50% were from Khomas region (central region) while 3(50%) were from Ohangwena region (peripheral region).

4.1 Availability of protocols and documents

Two (33.3%) healthcare facilities were in possession of a palliative care protocols while 4 (66.7%) did not have a palliative care protocols. Four (66.7%) healthcare facilities were in possession of an opioids protocol while 2 (33.3%) did not have opioids protocols. Among the six healthcare facilities, all 3 (50%) at peripheral region were in possession of referral documents to refer patients to next level while at the central region, only 2(33.3%) healthcare facilities were in possession of referral documents while 1(16.7%) did not have referral documents.

4.2 Availability of essential health programs

Two (33.3%) healthcare facilities were offering a DOT services for ART program while 4(66.7%) did not have a DOT service for ART program available. Among the healthcare facilities, 5(83.3%) were offering a TB program while one (16.7%) did not have tuberculosis program. Four (66.7%) healthcare facilities did provided a tuberculosis DOT service while 2(33.3%) did not have a DOT services for TB treatment. All healthcare facilities 6 (100%) were in custody of chronic disease management programs that are; hypertension, diabetic mellitus, asthma and social care services. Among the six healthcare facilities 3 (50.0%) were offering counselling service while 3 (50.0%) did not offer counselling services.

4.3 Availability of screening equipments

All six (100%) healthcare facilities were in custody of an x-ray services available for 5 days. However, 2(33.3%) health facilities at central region did not offer CT scan services, while

1(16.7%) had CT scan. At peripheral region, all 3 (50%) health facilities were not in possession of a CT scan. One (16.7%) health facility at central region had MRI scan, while 2(33.3%) did not have MRI scan. At peripheral region, all 3 (50%) health facilities were not in possession of MRI scan. At central region all 3(50%) health facilities had ultrasound machine while the three peripheral regional health facilities, only 1(16.7%) had ultrasound machine and 2(33.3%) did not have ultrasound machine.

4.4 Availability of medical suppliers and medical equipment for palliative care

The overall proportion related to availability of resources is presented in Table: 1

Table 1. Results indicating the proportion of medical suppliers for holistic palliative at healthcare facility level (n=6)

Variables	Availability outcome	Frequency	%
Sanitary accessories	Sufficient	4	66.7
	Not sufficient	2	33.3
Mobility accessories	Sufficient	1	16.7
	Not sufficient	5	83.3
Body cream	Sufficient	3	50.0
	Not sufficient	3	50.0
Wound care accessories	Sufficient	5	83.3
	Not sufficient	1	16.7
Feeding accessories	Sufficient	5	83.3
	Not sufficient	1	16.7

Among the six healthcare facilities who were in possession of sanitary equipment 4(66.7%) had adequate sanitary accessories while 2(33.3%) did not have adequate sanitary accessories. Of those who were assessed, five (83.3%) were not in possession of adequate mobility accessories, while 1(16.7%) had adequate mobility accessories. Three (50%) healthcare facilities were in custody of adequate body creams while 3(50%) had insufficient body creams. One (16.7%) healthcare facility did not have sufficient accessories for wound care, while 5(83.3%) healthcare facilities were in possession of sufficient wound care accessories. One (16.7%) healthcare facility did not have

sufficient accessories for feeding patients, while 5(83.3%) were in possession of sufficient feeding accessories. Similarly, healthcare facilities assessment outcome were cross-tabulated to test if there is a difference in availability of medical suppliers between the regions. A chi-square test was used to test the difference and a p-value <0.05 is regarded as statistically significant to reject the null hypothesis (Table 2).

Table 2. Difference between healthcare facility characteristic and availability of medical suppliers (n=6)

Variables		Availability outcome		x^2(df)	p-value
	Regions	Available	Not available		
Sanitary accessories	Central region	2	1	3 (1)	P=0.83
	Peripheral region	0	3		
Mobility accessories	Central region	1	2	2 (2)	P=0.368
	Peripheral region	0	3		
Body cream	Central region	1	2	0.667 (1)	P=0.414
	Peripheral region	2	1		
Wound care accessories	Central region	3	0	1.200 (1)	P=0.273
	Peripheral region	2	1		
Feeding accessories	Central region	2	1	1.200 (1)	P=0.273
	Peripheral region	3	0		
	Central region			3.024	P=0.82
	Peripheral region				

* indicates significant difference at α =0.05

4.5 Availability of treatment modalities for Palliative Care

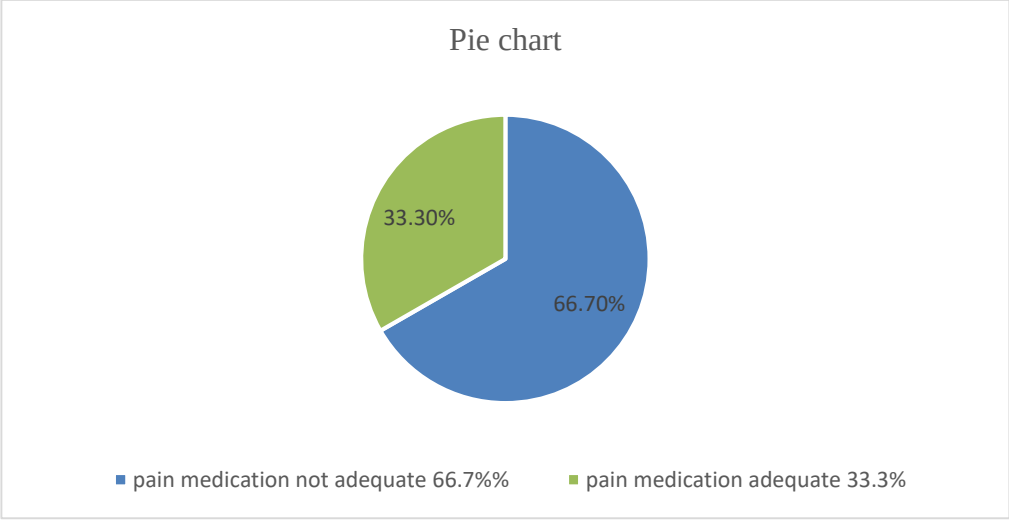

Figure 2. Pie chart indicating the availability of pain medications at the healthcare facilities.

Among the assessed healthcare facilities, 4(66.7%) were not in possession of adequate pain medication while only 2(33.3%) healthcare facilities were in possession of adequate pain medications. Healthcare facilities were assessed for the availability of radiotherapy service and 5(83.3%) were not in possession of radiotherapy treatments while 1(16.7%) had a radiotherapy treatment.

Table 3. Difference between healthcare facility characteristic and the availability of other pain treatment medication (n=6)

Variables		Availability outcome		x^2(df)	p-value
	Regions	Available	Not available		
Other Pain medication	Central region	2	1	3	0.083
	Peripheral region	0	3		

Table 4. Difference between healthcare facility characteristic and the availability of screening equipment (n=6)

Variables		Availability outcome		x^2(df)	p-value
	Regions	Available	Not available		
X- ray	Central region	3	3	..	…
	Peripheral region	3	3		
CT scan	Central region	2	1	3(1)	0.083
	Peripheral region	0	3		
MRI	Central region	1	2	1.2 (1)	0.273
	Peripheral region	0	3		
Ultra sound	Central region	3	0	3(1)	0.083
	Peripheral region	1	2		

* indicates significant difference at α =0.05

5. Discussion

Six health facilities were assessed, of which three were from central region while the other three were from peripheral region.

5.1 Protocols and documents

The majority, 66.7% of the health facilities were not in possession of palliative care protocol which stipulates the guidelines and criteria to be followed in the provision of holistic palliative care. The results is in disagreement with the study among healthcare professionals of England. In the England study, it was stipulated that guidelines have been written for clinical staff who provide palliative care and end of life care to patients in order to provide clear and accessible information [14]. Those information is needed for use in the patient's home, in the surgery and in the wards [14], therefore the absence of protocols may implicate the palliative care role played by healthcare workers at different levels of care. The results of this study revealed a discrepancy in the use of referral documents that could be attributed to difference in the provision of services supportive of palliative care. Similarly, mid-term evaluation of the African Palliative Care Association project of 2012 reported weak referral systems which is inconsistent and had no trusted referral process or criteria. The same report indicated that bi-directional referral forms have been developed by the MoHSS, but have not been used effectively. Consequently, the referral system is also being impaired by lack of transportation to the place referred, which is often too costly for clients [15].

5.2 Health programs

Regarding essential program, the directly observed therapy (DOT) services, most health facilities 66.7% in the current study did not display the availability of DOT for anti-retro viral therapy. The results of this study is contrary to Namibia's National Policy on Community Based Health where it was stipulated that, (DOT) for ART and tuberculosis should be one of the most common

strategies that health facilities and their staff should use to link with community own resource persons at community levels. The same report emphasised the importance of supportive supervision, referral and report back system in order to ensure continuity of care [16].In support, the study done in Spain among palliative care facilities, reported that at least 59 (83%) hospitals were able to provide palliative care services for patients with chronic diseases [17].

5.3 Screening equipment

The current study finds out that the radiological services were available for most of the week days to provide services to patient in palliative conditions. In support, Vascular and Interventional Radiology study among palliative patients revealed the importance of radiology in the assistance of palliative procedures to provide relief to patients. The same study stated that, radiography was used to show metastatic disease to lungs with symptomatic pleural effusion. Radiography also provide assistance with decisions to place catheter and drainage system for the palliative management of recurring ascites and pleural fluid. [18].The absence of scans and ultrasound especially at peripheral region could leads to delays of diagnosis and treatments.

5.4 Medical supplies and equipment for palliative care

About the availability of medical equipment and suppliers this study discovered that most, 66.7%, healthcare facilities had sufficient sanitary equipment. However, infection transmission among patients is crucial therefore those healthcare facilities who did not have sufficient sanitary equipment still pose greater risk of infection among patients. The rational for proper sanitary provision was stipulated [19] that, the hospice must provide a sanitary environment by following proper standards of practice, including nationally recognized infection control precautions, in order to avoid the transmission of communicable diseases [19].

On the availability of mobility equipment, the current study discovered that 66.7% did not have mobility accessories such as patient hoists and wheel chairs. Literatures advices that treatment and diagnosis of chronic illness require several equipment such as patient hoists, orthotic and prosthetic appliances, supportive seating, walking aids, and wheelchairs for mobility purposes [20].The study found that there was no statistical significant difference in proportions of the health facilities regarding the availability of the patient mobility equipment such as patient hoist ($p>0.005$).

5.5 Treatment modalities for palliative care

Palliative care drugs include medication for pain, medication for respiratory conditions, skin conditions and radiotherapy. The findings showed that most of the drugs were available at the pharmacies of the six health facilities. The current study indicated the insufficient pain medication which is consistent with the report [21], which stated that the adverse effect of inadequate palliative medications especially the opioids for pain affect the quality of patient care in the palliative care settings. The limitation to opioids could hamper the wellbeing of patients in terminal stage who need strong medications to alleviate suffering. Pain medications allow patients to die with dignity and pain-free, while providing balanced comfort measures and life-prolonging interventions [19].The lack of body cream medication may expose patients to pressure sore and that could lead to prolonged admission and burden to the health facilities.

6. Conclusion

This study concluded that, there are variations in the availability of most palliative care resources. Palliative care protocols, guidelines and criteria were not available in most of the health facilities. The use of referral documents and referral process varies among health facilities. This study indicated the limited availability of pain medication. The healthcare facilities were dominated by lack of pain medications to relieve pain among palliative care patients. While most palliative care

patients require assisted ambulation, as well as bed care bathing, limited mobility accessories and inadequate body creams among health facilities were reported. The study concluded that while the healthcare facilities marked some indications of available resources, the crucial resources such as patient hoist and morphine medications are needed to improve the quality of holistic palliative care in the Namibian public health system. This study recommends the following aspects as indicated by the findings: Health care facilities should be equally provided with protocols, guidelines, referral tools and medical equipment in order to provide holistic palliative care to all patients in need. Introduce policy on the prescription of opioids by trained nurses to alleviate suffering. Train managers of health facilities on the ordering and maintenance of sufficient stock such as pain medications, mobility and skin care accessories for patient care.

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