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QUALIFICATION WORK

on the topic **«ANALYSIS OF PROBLEMS IN ORGANIZING EFFECTIVE PALLIATIVE CARE FOR PATIENTS IN MOROCCO»**

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ANNOTATION

The qualification work is dedicated to the justification of the social component of palliative care. The work presents the results of a study of the level of integration of palliative care into the healthcare system of the countries of the Middle East and North Africa.

The work is presented on 43 pages and consists of 3 chapters, general conclusions and a list of used literature from 32 sources. The results of the study are illustrated by 10 figures and 11 tables.

Key words: palliative care, health system, indicators, Eastern Mediterranean region, national level.

АНОТАЦІЯ

Кваліфікаційна робота присвячена обґрунтуванню соціальної складової паліативної допомоги. У роботі представлено результати дослідження рівня інтеграції паліативної допомоги в систему охорони здоров'я країн Близького Сходу та Північної Африки.

Робота представлена на 43 сторінках і складається з 3 розділів, загальних висновків та списку використаної літератури з 32 джерел. Результати дослідження ілюстровані 10 рисунками та 11 таблицями.

Ключові слова: паліативна допомога, система охорони здоров'я, показники, регіон Східного Середземномор'я, національний рівень.

CONTENTS

ABBREVIATIONS

AMO – Assurance Maladie Obligatoir

EU – European Union

EIU – Economist Intelligence Unit

WHO – World Health Organization

MENA – Middle East and North Africa

NCDs – Noncommunicable diseases

PC – Palliative care

HIV– Human immunodeficiency virus

INTRODUCTION

Actuality of topic. The development and improvement of the quality of palliative care (PC) in accordance with international standards is one of the priority tasks of the health care system of all countries [5,18]. Palliative care is a complex of medical, social, and psychological measures aimed at improving the quality of life of patients with incurable diseases and a limited life prognosis. To create a highly effective PC system, it is necessary to overcome the barriers identified by World Health Organization (WHO) experts [4]. Among the main tasks, it is necessary to consider the maximum possible reduction of pain, physical and mental suffering, elimination or reduction of vital disorders and other serious manifestations of diseases, professional care, psychological, social and spiritual support for patients and their family members.

Palliative care is a relatively new component of modern medicine, but recently the need for this type has been steadily growing. According to WHO experts, in recent years, 40 million people need it annually in the world, almost 80% of whom live in low- and middle-income countries [3].

Taking into account the modern world concept of palliative and hospice care, the search for optimal forms of its provision, quality assurance and accessibility for the population is of particular relevance.

Palliative care is the right of every person, regardless of gender, age, ethnicity, financial security. An increase in the average life expectancy of people, the progression of non-communicable diseases, the simultaneous presence of two or more chronic diseases or disorders in a patient will contribute to a progressive increase in the need for palliative care. Therefore, it is important to pay special attention to palliative care management: understanding that this is not just administration, but the creation of a system where human dignity is higher than medical indicators.

National standards of palliative care vary around the world, with many countries, especially those with high incomes, integrating holistic care into national health policies, focusing on pain management, quality of life, and family support.

The purpose of the qualification work to analyze the problems of organizing effective palliative care for patients in Morocco.

To achieve the set goal, the following research tasks were defined:

– analyze the formation and development of palliative care in the world;

– to investigate the problems of organizing effective palliative care in the Eastern Mediterranean region;

– to assess approaches to implementing a national palliative care strategy in Morocco.

Research objectives. International standards for providing PC, the legislative framework regulating the process of providing PC, statistical indicators of morbidity in the population of MENA countries.

The subject of the study was an analysis of the system for integrating palliative care into the national health program of Morocco.

Research methods. Bibliographic, logical, system-analytical, structural-logical, graphic.

Practical significance of the work. It consists of analyzing Morocco's national policy on the application of palliative care to those in need using WHO indicators, identifying its shortcomings and positive aspects.

Elements of scientific research. In the qualification work carried out at the Department of Social Pharmacy of the National University of Pharmacy, for the first time, a higher education student, together with a scientific supervisor, conducted a structural analysis of palliative care from the point of view of compliance with WHO indicators.

Structure and scope of qualification work. The work is presented on 43 pages and consists of 3 chapters, general conclusions and a list of references, which consists of 32 sources. The results of the study are illustrated by 10 figures and 11 tables.

CHAPTER 1

RESEARCH INTO THE FORMATION AND DEVELOPMENT OF PALLIATIVE CARE IN THE WORLD

1.1 Basics of organizing and providing palliative care

The economic and social well-being of a country directly affects the effectiveness of the health care system. The constitution of each state enshrines the obligation to create conditions for effective access of the population to medical services and medical care; to ensure the protection and promotion of the health and well-being of citizens [16].

Palliative care is a relatively new field of modern medicine, but the need for it is constantly growing. In 1982, the World Health Organization (WHO) initiated the creation of palliative medicine as a means of helping terminally ill (incurable) cancer patients [13]. Data indicate that more than 40 million people need it annually. By 2040, the global need for palliative care (PC) could increase by an average of 36% [1]. It aims to provide symptomatic treatment, pain relief, appropriate nursing care, psychological support and social assistance to patients with life-threatening or incurable diseases, when treatment is ineffective or hopeless. PC is provided to patients with incurable, progressive, life-limiting diseases.

Currently, there are several comprehensive interpretations of the concept of "palliative care", which allow us to track changes in content over time and the complexity of definitions from key organizations that study and interpret palliative care to the population, including WHO, the European Association for Palliative Care, the International Association for Hospice and Palliative Care, the Center for the Development of Palliative Care, and the National Consensus Project on Quality Palliative Care [19].

The WHO definitions have remained unchanged for the past 20 years. Among all of them, two main common features can be distinguished: comprehensive care

(meeting physical, intellectual, emotional, social and spiritual needs) and improving the quality of life not only of palliative patients, but also of their families/caregivers.

For planned work with such patients, it is necessary to create and develop an effective legal framework that regulates the provision of palliative care to patients at different stages of the disease, the organization of interdepartmental and interdisciplinary coordination and interaction, since this quite often concerns both the sphere of activity of healthcare institutions and social protection institutions [24].

Most countries in the world have recognized and adhere to the central importance of palliative care, which is based on a humane attitude towards the terminally ill (tabl.1.1) [24].

Table 1.1

Basic formation of the necessary core of palliative care

Fundamental	Comments
Life and death	affirms life and recognizes dying and death as a natural process
Quality of life	does not intend to bring death closer or delay it, but rather ensures the patient's maximum achievable quality of life
Accessibility and equality	ensures accessibility of care based on clinical indications, and not on nosological forms of the disease, the patient's location, age, gender, economic status; provides for adequate and equitable funding of palliative and hospice care facilities and services
Dignity and support	ensures respect for the human dignity of the patient and his family members; enables any person who needs such assistance to receive it without delay and in full
Active measures	provides for active therapeutic and diagnostic measures only with the patient's consent, in the absence of which treatment and medical interventions should be immediately discontinued

For the first time, all aspects of palliative care needs are summarized and presented in the World Atlas of Palliative Care at the End of Life, published by WHO and the World Palliative Care Alliance. It provides the definition of palliative care proposed by the WHO, but elaborated on from the perspective of a comprehensive approach [1,3-5].

In this program, the main directions in the application of assistance were identified.

First, patients with chronic, life-threatening, or life-limiting diseases need help.

Second, there are no time frames, no forecasts, and no pre-screening requirements for palliative care. That is, PC should be provided based on the person's needs, not on the basis of diagnosis, which means expanding access to palliative care.

Third, care is not limited to the specialized level, but covers both primary and secondary levels of medical care, the document provides evidence of the need for palliative care at different levels.

According to the levels of PD provision in the world, they are divided into three levels [4,22]:

Level 1. Primary or universal PD ("*palliative approach"),* which can be implemented by all medical workers who have undergone special training and acquired the appropriate qualifications.

Level 2. Basic or general PD, which is provided by primary care specialists and those who treat patients with life-threatening diseases, doctors who have a narrow specialization (for example, oncologists, hematologists, neurologists, etc.) — such specialists must have basic knowledge of palliative care.

Level 3. Specialized palliative care provided by teams of specialists from different specialties to patients with complex problems (e.g. hospice specialists, palliative care units, palliative care field services). This function is performed by services, the main activity of which is the provision of palliative care. Their employees must have a high level of special training.

According to the WHO practice the main components of comprehensive palliative care are a combination of medical, pharmaceutical, social, psychological and spiritual approaches aimed at improving the quality of life of terminally ill patients and their families (fig.1.1).

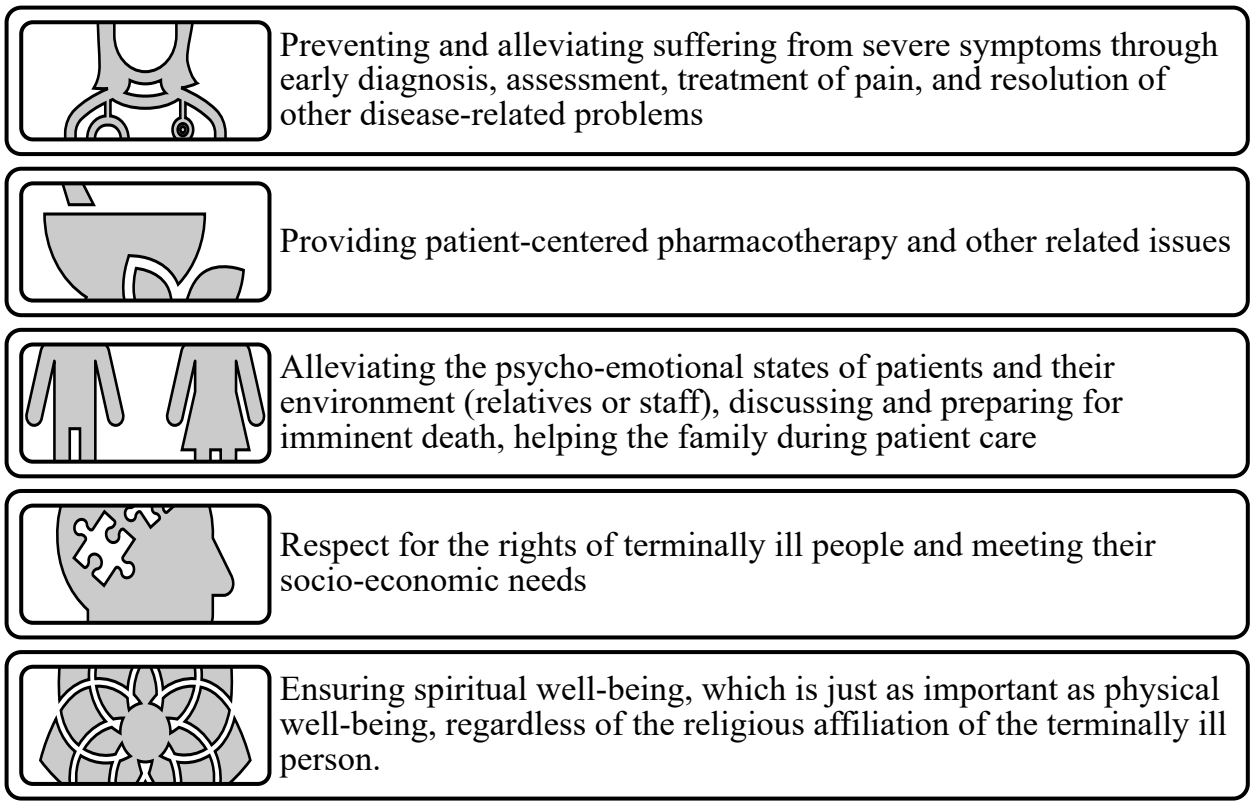


Fig.1.1 Key components of comprehensive palliative care

The effectiveness of PC is measured by the quality of life, not the patient's life expectancy, which requires constant monitoring of symptoms (comfort), so its solution depends on an integrated approach. This includes an interdisciplinary approach, early access to pain relief, psychosocial support for the patient and their family, open dialogue (communication), shared decision-making (choices) and empowering patients to manage their care (control), as well as continuity of care.

This interprofessional approach heals the person, meeting physical, emotional, and spiritual needs while supporting families.

To create an adaptive PC system that would be able to quickly adapt to the new needs of the patient, it is necessary to understand not only the nature of the disease, but also the features of its course. Therefore, it is important to determine

that in each individual case of the disease there are features that depend on many factors. Among them, the course of the disease, the severity of the condition, disorders, age, personal family relationships, family composition, educational level of the patient, social support, place of residence, availability of medical, pharmaceutical and social assistance. The factors that affect the organization of PC are complex and multidimensional, personal and systemic. Considering the above, the factors that affect the level of PC provision are systematized. First, these are the individual characteristics of the patient, medical and interpersonal, organizational and structural factors, social, legislative levels, professional competence of the staff. It is worth noting that interaction at each level affects access to medical care, as well as the ability to meet the current needs of the patient and his family.

The results of the analysis of factors influencing the effectiveness of PC provision are presented in table 1.2.

Table 1.2

Key Factors of PC Effectiveness

Factor	**Level of approach**	**Practical granting**
1	**2**	**3**
Medical and symptomatic	Pain and symptom control	Effective pain relief, management of shortness of breath, nausea, fatigue, other physical manifestations of the disease is a top priority.
	Early detection and intervention	The sooner palliative care is started, the better results it gives for the patient.
Organizational and structural	Multidisciplinary approach	Involvement of a team of specialists of various profiles: doctors, nurses, psychologists, social workers and, if necessary, spiritual mentors.
	Accessibility and funding	Availability of a government strategy, sufficient funding and free of charge services for the patient.
	Continuity of care	Regular monitoring of the patient's condition and continuous care from the day of treatment to the last day of life.

continuation of the table 1.2

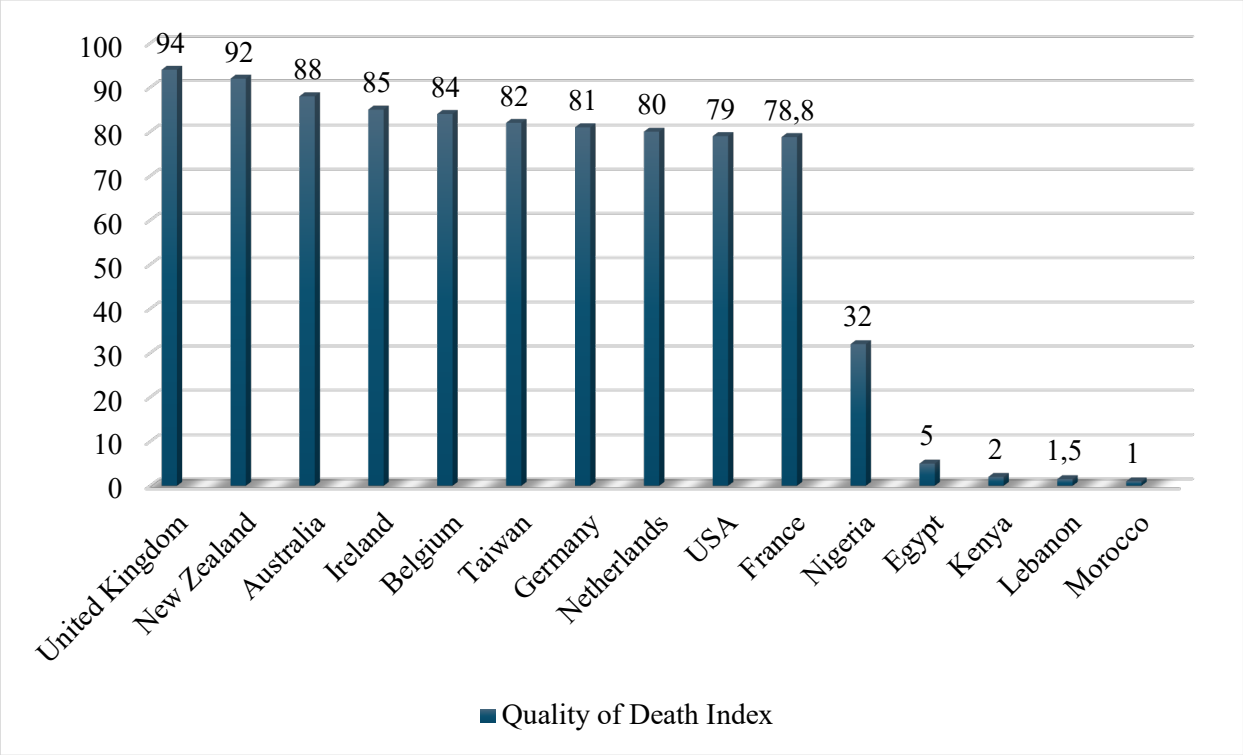
1	2	3
Communication and Ethics	Quality of communication	Open and honest communication between medical personnel, the patient and his family. Effective symptom control is almost impossible without proper mutual understanding.
	Dignity and autonomy	Respect for the patient's choice regarding the place and treatment methods, as well as considering his religious and personal values.
	Joint decision-making	Involving the patient and relatives in the planning of all stages of care.
Psychosocial and spiritual support	Family support	Providing psychological assistance to loved ones and teaching them nursing skills.
	Spiritual accompaniment	Considering the existential and religious needs of the patient.
Professional competence	The level of training of medical personnel	Their skills in communicating with terminal patients and readiness for emotional challenges

The general aging of the population and the spread of serious chronic diseases are placing a burden on the healthcare systems of many countries. These are the main reasons for the growing need for palliative care, the aim of which is to provide decent care for terminally ill patients at the end of their lives. A comprehensive tool that allows you to compare the state of palliative care in different countries of the world is the "Death Quality Index" [17].

According to end-of-life care scores, the United Kingdom, Australia and New Zealand generally rank among the highest in terms of 'quality of death' due to well-

established palliative care, predictive planning, strong hospice movements and social communication. These systems prioritize minimizing suffering and respecting patients' preferences rather than simply prolonging life.

As of 2025, the term "Quality of Death" most often refers to global palliative care rankings and conditions for dying patients. The latest comprehensive data is based on research by the Economist Intelligence Unit (EIU) and the Lien Foundation, which ranks countries in terms of pain relief, staff training, and hospice availability (fig.1.2) [6,12,17,20,26].



Source: EIU; Lien Foundation

Fig.1.2 Overall death quality index ranking by country

1.2 Research into organizational approaches and determining indicators of palliative care needs in world practice

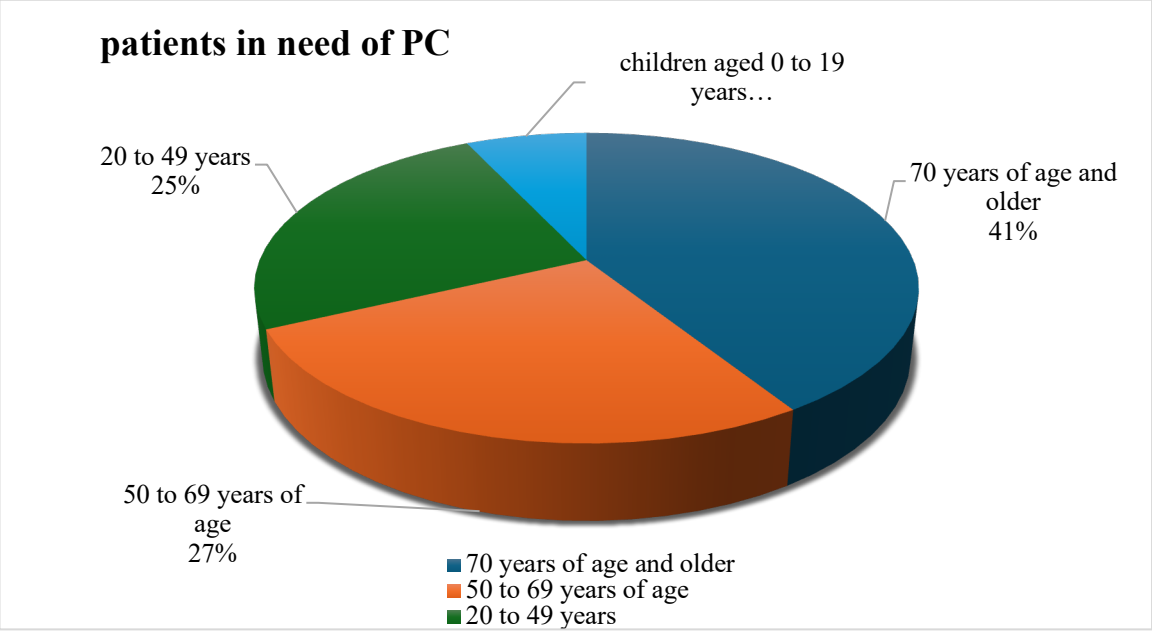
Every year, about 50 million people worldwide need palliative care, but its availability remains insufficient due to limited integration into health systems and an aging population [18]. The UN Population Division has released data that between 1950 and 2024, human life expectancy increased from 46.5 years to 72.3

years, and it is expected that by 2050, the average human life expectancy will be 78.2 years [23].

Estimating the number of patients in need of palliative care is very important for planning the necessary resources. The assessment of need should be carried out at the level of each country. There are different approaches and studies around the world to determine the population's need for palliative care.

Researchers and government agencies often use proven algorithms. According to the Rosen Method, it is estimated that 60% to 80% of all deceased persons (excluding sudden death, traffic accidents, etc.) require palliative care. This is the easiest way to quickly estimate the minimum need for a region. The need for PC at the end of human life is expected to double by 2060 [1-4]. According to the WHO, more than 57 million people require PC annually, 31 million of whom are in the terminal stages of their disease and 26 million at the end of their lives. According to WHO, no more than 12 percent of all those in need receive palliative care per year [24,25].

Approximately 40% of patients requiring PC are 71 years of age and older, 27% are 50 to 69 years of age, and nearly 25% are 20 to 49 years of age. Children aged 0 to 19 years account for only 7% (fig. 1.3) [2,21].



Access: Global Atlas of Palliative Care, 2025

Fig. 1.3. Global need for palliative care by age group

The Mortimer and Gigginson method is a more precise tool used by the WHO. It is based on an analysis of ICD-10 (International Classification of Diseases) codes. The need is calculated as the sum of all deaths from specific disease groups [18].

The most common methods use so-called “routine data”. Determining the need for palliative care based on routine data is the gold standard in world practice. Today, the main provisions for assessing the need are accepted in the world, which are based on the analysis of official statistics on mortality and morbidity (table 1.3).

Table 1.3

Basic provisions for need assessment

Evaluation	Clarification
Data sources	The most used data are on causes of death, hospitalizations, and referrals that are generated by the health system.
Risk groups	Most patients in need of PC suffer from chronic cardiovascular disease, cancer, other chronic diseases, AIDS and diabetes mellitus.
Symptoms	Palliative care aims to relieve pain, depression, shortness of breath, fatigue and other symptoms that reduce quality of life

This approach allows for the transformation of abstract figures into concrete strategies for planning health services, helps to predict needs at the population level. Death registration data, primary and secondary care data are increasingly used in research on palliative care and end-of-life care [20].

Regardless of what model of PC is implemented in the country, the principles of its provision are based on international standards that aim to provide a better quality of life for a person.

Based on the approaches proposed in the Global Atlas of Palliative Care and data on mortality and prevalence of certain diseases in developed countries, it is

possible to distribute the causes of death with the countries that entered the top ten with the highest quality of death tabl.1.4) [1-6,13,17,26].

Table 1.4

Distribution of causes of death in different countries, per 100 thousand population, 2023 [

A group of diseases	Great Britain	Australia	Ireland	Belgium	Germany	Netherlands	USA	France
Cancer	259	191	191	263	292	273	192	269
Cardiovascular	231	182	193	274	412	231	247	226
Alzheimer's disease	114	58	47	75	53	91	83	78
Chronic obstructive pulmonary disease	52	37	42	61	54	57	57	32
Cirrhosis	13	8	9	15	18	6	16	14
Parkinson's disease	11	8	9	12	14	11	10	11
Diabetes	9	20	13	17	31	17	26	19
Kidney disease	8	11	11	21	27	14	19	14
Multiple sclerosis	3	2	2	2	3	3	2	2
Rheumatoid arthritis	1	1	1	2	2	2	2	1
Tuberculosis	0	0	0	1	0	0	0	1
HIV / AIDS	0	0	0	0	1	0	2	1

At present, it is customary in the world to use the main categories of conditions that determine the need for PD, which allows us to determine the main nosological groups in which PD is provided (table 1.5) [1-6,20,21,26].

Table 1.5

The main categories of conditions that cause the need for help

Categories of states		Example of a disease
I	NEOPLASMS, INCLUDING BENIGN	Lambert-Eaton syndrome Other myasthenic syndromes in neoplasia
II	CHRONIC OBSTRUCTIVE LUNG DISEASES	Emphysema, Asthma, without mention of chronic obstructive pulmonary disease Bronchiectasis disease
III	CHRONIC CARDIOVASCULAR DISEASES	Hypertensive heart disease with heart failure Chronic ischemic heart disease Severe heart defects
IV	NEUROLOGICAL LESIONS	A stroke Inflammatory diseases of the central nervous system Parkinson's disease Alzheimer's disease Multiple sclerosis
V	CHRONIC LIVER DISEASES	Liver fibrosis and cirrhosis Congenital malformations of the gallbladder, bile ducts, and liver
VI	CHRONIC KIDNEY	Glomerular diseases
VII	DIABETES	Type 1-2 diabetes mellitus with diagnosed diabetic nephropathy
VIII	CHRONIC MENTAL ILN.	Schizophrenia Severe mental retardation
IX	HIV/AIDS	A disease caused by the human immunodeficiency virus that is accompanied by another condition
X	GENETIC AND METABOLIC DISORDERS	Wolfram syndrome and others

The main significant positions on which national governments are oriented when developing strategies and organizing palliative care for the population are

enshrined in the documents of international organizations. In 2004, the World Health Organization published "National Guidelines for Palliative Care" [15,28]

Conclusions to chapter 1

After studying the relevant sources, it can be concluded that the key factors for high-level implementation of PC are the legislative framework, staff qualifications, availability of medicines, financing of health facilities, availability of mobile teams, and training of family caregivers.

According to the results of a study of the managerial aspects of the PD system in the world, various organizational models have been identified, which depend on the type of national healthcare system, economic, socio-demographic and epidemiological situation, and territorial organization of the country.

Organizational approaches to providing PC largely depend on the economic situation of the state, for example, the inpatient model has a high cost, therefore it is practiced in more developed countries, such as the United Kingdom, which is a leader in providing PC.

It has been determined that the need for palliative care at different levels depends not only on the mortality rates of the population due to diseases for which such care is necessary, but also on the model of organization of the healthcare system and the degree of integration of palliative care into it.

Palliative care is needed for incurable, progressive, life-limiting illnesses. The main categories include oncology (stage III-IV), cardiovascular diseases, severe neurological diseases (dementia, motor neurone disease), HIV/AIDS, chronic obstructive pulmonary disease, renal/hepatic failure, and congenital malformations in children.

CHAPTER 2

RESEARCH ON THE PROBLEMS OF ORGANIZING EFFECTIVE PALLIATIVE CARE IN EASTERN MEDITERRANEAN REGION

1.1 Healthcare system and key performance indicators in MENA countries

The health care system is made up of health care organizations, institutes, resources, and people whose primary goal is to improve health. Strengthening health care systems requires overcoming difficulties related to staffing, infrastructure, medicines, material and technical base, introduction of the latest technologies and effective financing. It is necessary for such a system to respond quickly and provide financially fair services for the proper treatment of people. The poor state of health systems in many developing countries is one of the most significant obstacles to expanding access to basic health and palliative care.

Despite the variety of specific forms of organization of the public health care system, the specifics of economic relations in this area of society, a number of basic parameters can be distinguished that reflect the commonality of development inherent in different countries.

Among those that express the main features of the healthcare system, its main economic indicators include [28]:

- property relations;
- methods of obtaining resources;
- mechanisms for stimulating health care workers, producers and consumers;
- forms and methods of controlling the volume and quality of medical and pharmaceutical care.

Each country develops and develops its own way of attracting economic resources to provide palliative care, preserve and strengthen the health of the population. The quantity and quality of resources allocated by society, the effectiveness of their use in the field of health care is determined by a complex

system of economic, political, moral, ethical and other relations that have developed in the country.

According to the definition of the WHO, the Eastern Mediterranean region includes 22 countries. These countries have significant populations, sizes, income levels, human development index, health outcomes and health expenditures [11].

The primary responsibility for the provision of health services in most Middle Eastern countries lies with the state, characterized by centralized funding, service delivery, and regulatory infrastructure. Health systems in most MENA countries were originally organized to provide primary health care services. Changes in healthcare and demographic changes, accompanied by an increasing burden of chronic diseases, have led to increased investment in inpatient care in recent years.

Key challenges faced by low- and middle-income countries include high out-of-pocket costs. More than two-thirds of health care costs are borne by the patients themselves, driving their families into poverty due to the catastrophic cost of treatment. The rise in noncommunicable diseases such as heart disease, diabetes and cancer is causing a significant proportion of deaths. The rise in road traffic injuries is a major challenge for health systems, especially in MENA countries [11].

As of 2026, the region is undergoing a large-scale transformation aimed at digitalization and combating the growing burden of noncommunicable diseases [2].

Based on demographic and economic characteristics, income levels, and health care system efficiency indicators, the region can be divided into three main groups:

- high level of government spending,
- middle-income countries,
- low-income countries.

In Table 2.1, we have given general statistics on population and health for which countries in the MENA region [2,9,11].

Table 2.1

Demographic and economic overview of the Eastern Mediterranean Region (2024)

Country	Population	Health expends (per capita)	Income Level	Life expectancy at birth	Human development index rank	Physicians per 1000 inhabitants
Egypt	116540112	181.67	Lower middle		100	0.71
Iran	90543123	394.21	Upper middle		75	1.79
Iraq	45056011	247.67	Upper middle		126	0.87
Jordan	11551864	298.11	Lower middle		100	2.51
Kuwait	4972961	1861.75	High icome		52	2.39
Lebanon	4936827	305.11	Lower middle		102	2.62
Morocco	38126283	219.07	Lower middle		120	0.83
Oman	5281538	853.51	High icome		50	2.09
Pakistan	255348163	45.12	Lower middle		168	1.08
Qatar	3214609	2200	High icome		43	7.74
Saudi Arabia	34566328	1840	High icome		37	3.07
Sudan	51432151	210.00	Low income		162	0.3
Tunisia	12665802	265.46	Lower middle		105	1.28
UAE	11876982	2401.00	High icome		15	2.91
Yemen	40581163	47.23	Low income		184	0.3

In figure 2.1, we reflect groups of indicators that are used to assess the effectiveness of health care systems in the region [9,11].

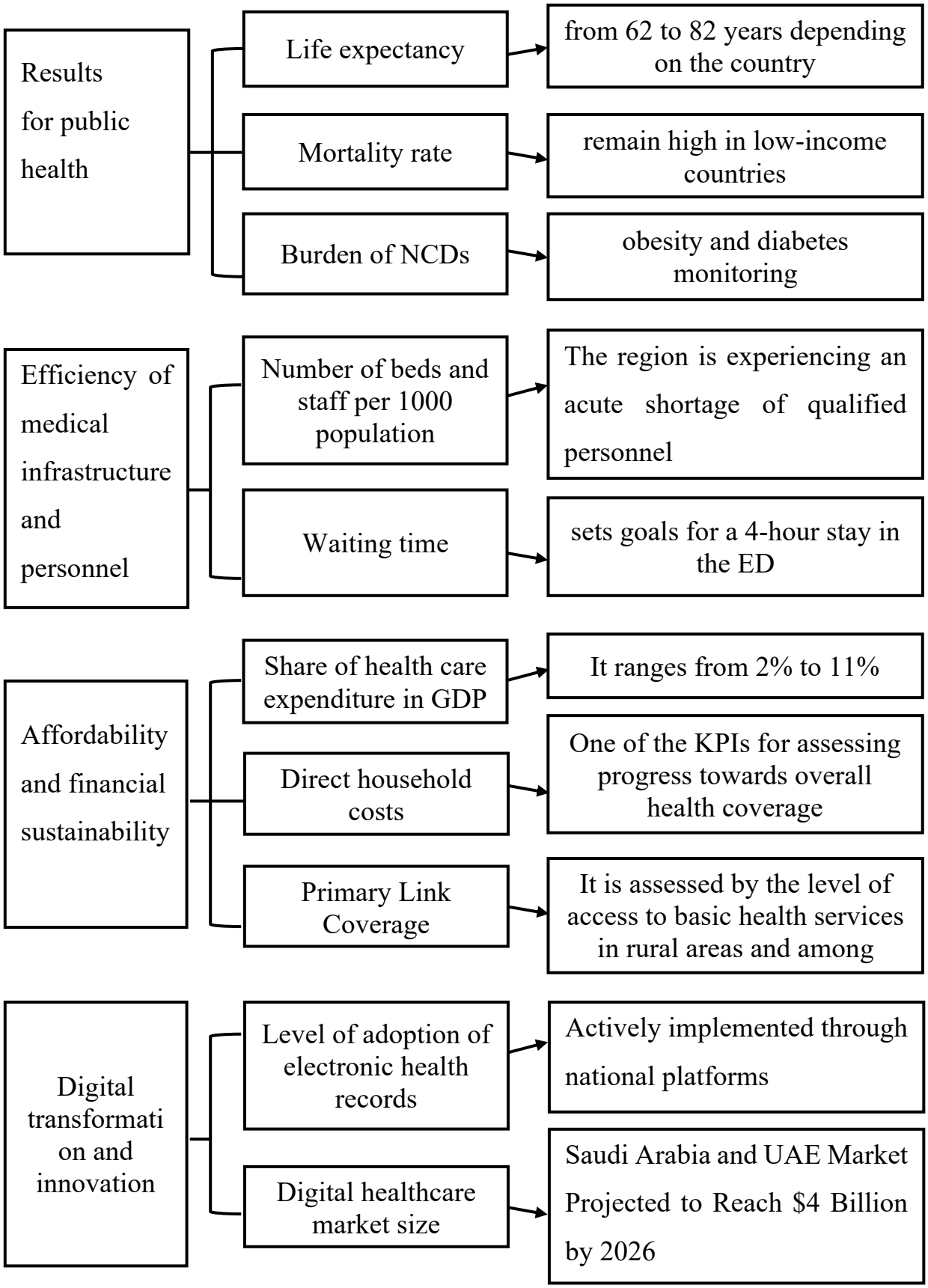


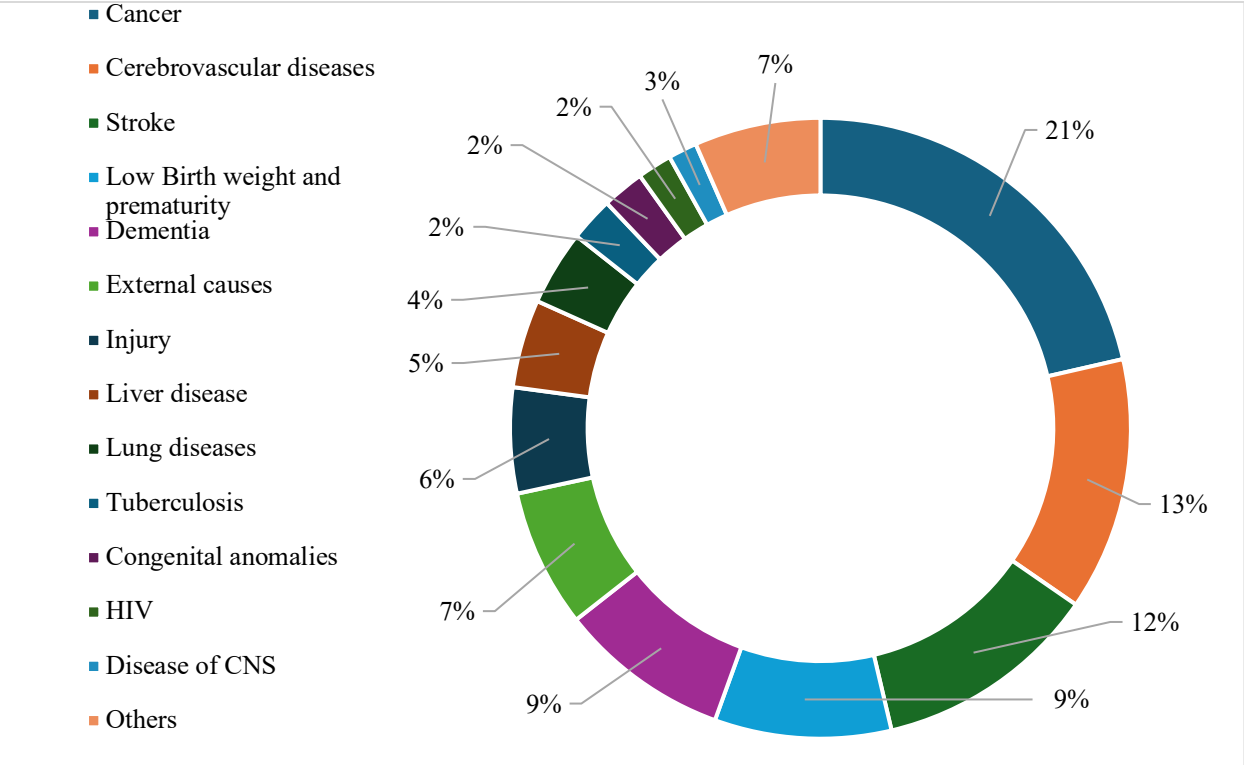
Fig.2.1 Key Performance Indicators (KPIs) and Trends

2.2 Analysis of palliative care organization in MENA

Palliative care delivery varies significantly between countries, health systems, and regions due to differences in resource availability and allocation, local policies, and cultural norms.

By 2025, it is estimated that about 3 million people experience serious health-related suffering each year and need palliative care in the region. Less than 1% of people in need of assistance actually receive specialized services. Historically, about 54% of all deaths in the region are attributable to conditions requiring palliative care, particularly due to cardiovascular disease and cancer, with cancer incidence and mortality rates in the region increasing faster than the global average [2,9,11].

According to WHO estimates, about 2.4 million people in this region die annually in need of palliative care precisely due to terminal conditions or at the end of life. To estimate the global burden of palliative care, mortality data from the most common diseases in the region are used, taking into account both physical and psychosocial symptoms (fig.2.2-tabl.2.2) [2,32].



Access: Global Atlas of Palliative Care, 2025

Fig.2.2 Major health conditions requiring palliative care

Table 2.2

Palliative care needs of those who have died from serious health-related suffering (2024) (in thousands) [2,9,11,12,17,22,32]

Country	Cancer	Cerebrovascular diseases	Tuberculosis	Stroke	Dementia	Chronic IHD	Diseases of liver	AIDS /HIV	External causes
Egypt	65.29	36.86	0.32	24.46	11.78	6.32	51.92	0.33	35.1
Iran	48.99	27.53	1.44	54.00	13.74	4.46	3.93	62.00	35.8
Iraq	31.0	247.67	1.0	18.0	13.0	0.87	3.9	0	51.2
Jordan	7.00	1.86	0	4.0	5.0	1.0	0.5	0	2.8
Kuwait	1.0	0.58	0	1.0	2.0	0.3	0.2	0	1.2
Lebanon	9.0	2.14	0.1	4.0	9.0	0.62	0.7	1.0	2.6
Morocco	42.0	13.98	3.5	27.0	36.0	1.72	4.2	14.0	12.0
Oman	2.0	0.53	0	1.0	1.0	0.12	0.2	1.0	1.9
Pakistan	96.49	70.96	44.67	22.21	12.34	13.25	19.14	3.57	35.56
Qatar	0.47	0.11	0.01	0.02	0.08	0.03	0.07	0	0.27
Saudi Arabia	9.08	7.42	0.71	1.16	4.36	1.18	1.99	0	5.13
Sudan	14.25	17.69	8.04	5.43	3.8	2.17	6.37	2.99	12.09
Tunisia	6.94	7.01	0.24	0.36	4.07	0.59	1.56	0.08	1.53
UAE	1.37	1.1	0.04	0.09	0.24	0.19	0.28	0	0.76
Yemen	7.56	11.72	1.12	0.55	2.26	1.6	3.67	0.34	6.96

As we can see from the study in the region, cancer is becoming one of the main causes of mortality, ahead of many other diseases. According to the WHO, there will be the highest increase in new cancer cases in countries in the coming decades, due to aging populations, lifestyle changes and environmental factors.

In responses to humanitarian crises and health emergencies, all actors (ministries of health, private and public institutions, and humanitarian response organizations) must implement concrete steps to ensure the integration of palliative care for those in need.

Countries in the Middle East and North Africa are seeing a strong push for palliative care programs at the national strategy level, although the degree of integration into national health systems varies considerably. As of 2025, several countries in the region have formally adopted national palliative care plans or strategies (tabl.2.3) [2,8,9,11,32].

Table 2.3

Main programs for the implementation of palliative care by country

Country	Health Policies
1	2
Saudi Arabia	Vision 2030 initiative (Model of Care program) "Last Phase" initiative to expand access to services at the primary healthcare level
Jordan	"National Strategic Framework for Palliative and Home Care" "National Cancer Control Strategy 2026-2030", which provides for the integration of palliative care at the national level
Kuwait, Qatar and Oman	Countries have specific national strategies that are periodically evaluated. Pilot projects for palliative care at home have been launched in Kuwait and Oman.
Iran	2010s National Cancer Control Plan
Lebanon	2018-2023 National Cancer ControlPlan

continuation of the table 2.3

1	2
Tunisia	2015-2019 National Cancer Plan. NCD surveilance
UAE	2022-2026 National Cancer Control Plan; Abu Dhabi DoH
Sudan	2012-2016; 2023-2030 National Control Strategies; NCD surveilance
Morocco	2019-2029; 2025 Multisectoral NCD Strategy, Health Plan 2025, National Cancer Plan It is reported that there are national plans and the appointment of responsible persons in the ministries of health.

According to WHO recommendations, national policies should include personalized therapy as part of basic, universally accessible health services, particularly during emergencies. At the end of 2025, 22 health ministers from the WHO Eastern Mediterranean Region adopted a resolution to accelerate the integration of palliative care into national health systems.

The analysis showed that six countries have a specific national palliative care strategy or plan (Saudi Arabia, Kuwait, Qatar, the Islamic Republic of Iran, Lebanon and Jordan), and two have references to palliative care in their national cancer strategies (Morocco and Pakistan). In three countries, a national palliative care strategy has been implemented and is being periodically evaluated (Saudi Arabia, Kuwait and Qatar). In six countries, a person has been designated in the Ministry of Health or equivalent to be responsible for palliative care [32].

High dependence on external donors makes national PP programmes unstable. For most patients, services remain paid, which makes them inaccessible in conditions of poverty.

As of 2025, palliative care development in the Middle East and North Africa is assessed using the Eastern Mediterranean Palliative Care Atlas 2025 and the Global Palliative Care Development Index [2]. The global level of palliative care development is based on the availability of pain relief, the number of inpatient beds/mobile services, and regulatory support. Development is evaluated in accordance with WHO standards. The World Health Organization promotes four main areas: appropriate policies, availability of drugs (including morphine), education and implementation at all levels. The region is characterized by significant differences, from countries that are at the initial level to those that show steady progress.

Specialized palliative services are one of the main areas of PD. They are designed for patients with complex needs that exceed the capabilities of general medical services. These include: symptom management, care planning, mobile teams. Specialized services provide multidisciplinary care to relieve symptoms, pain, and stress, often along with medication. Unfortunately, in MENA countries there are only 0.04 services per 100,000 inhabitants, which is one of the lowest rates in the world. The density of services per 100,000 inhabitants is 0.05 ± 0.04, with higher service densities in Lebanon, Qatar and Saudi Arabia [2,8,9,11,32]..

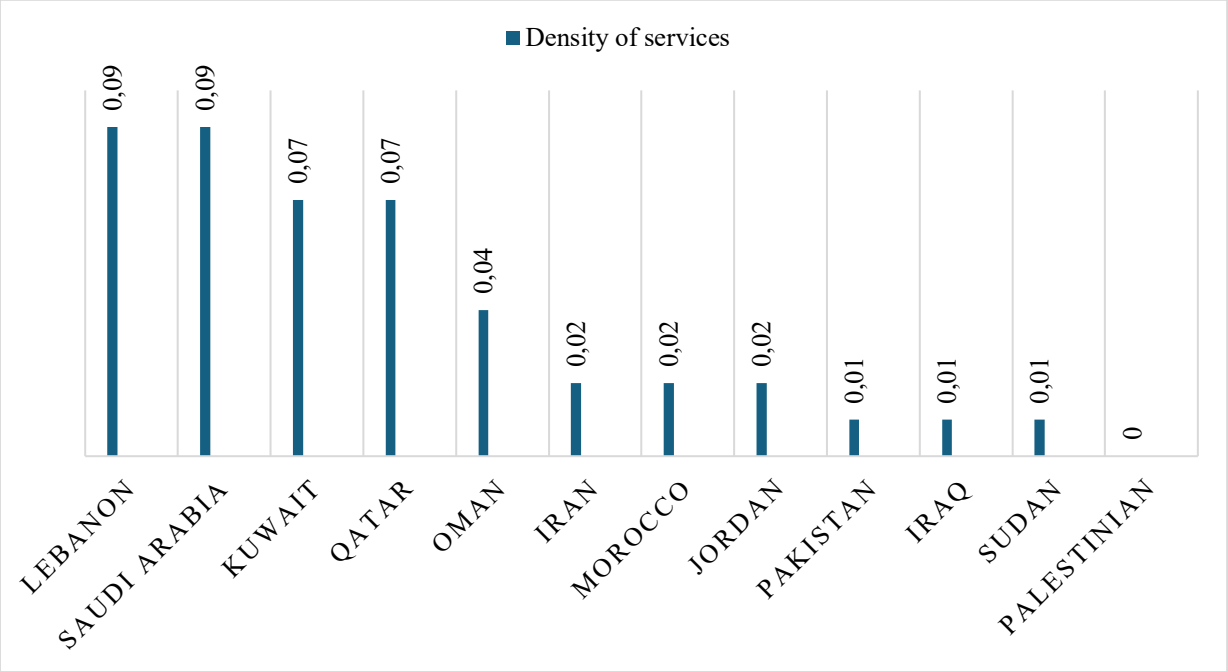
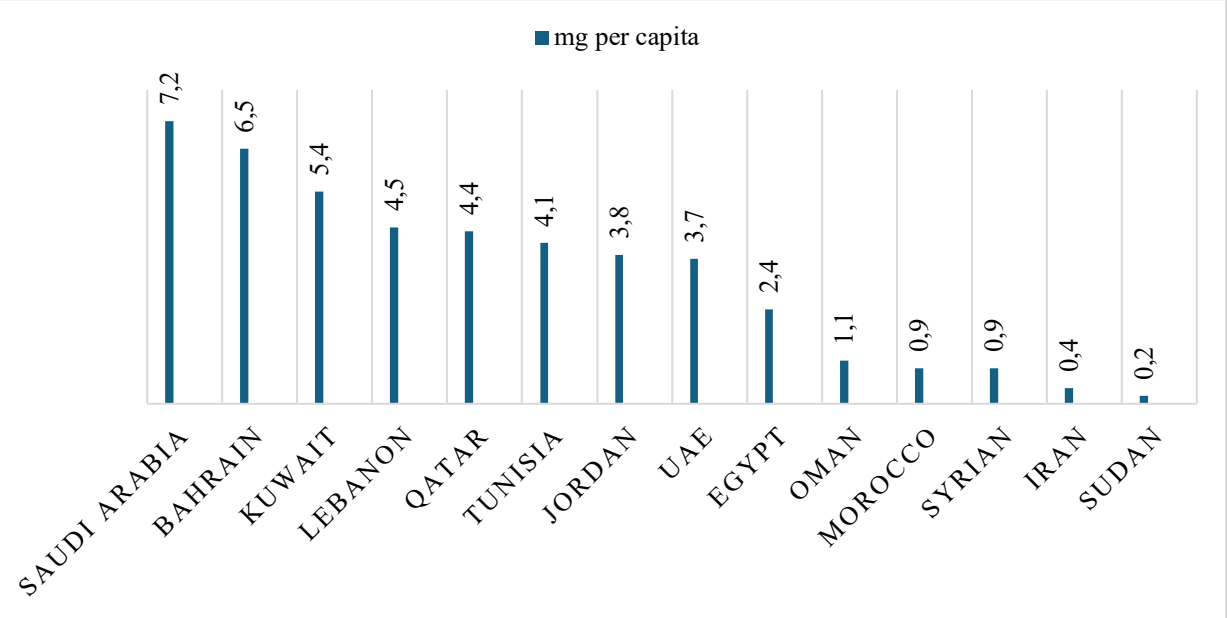


Fig.2.3 Provision of specialized palliative care services per 100,000 residents

The average consumption of opioids in the Eastern Middle Sea is only 2.40 mg per capita per river, which is significantly lower than the world average. For comparison, in North America this figure reaches 144 mg, and in Europe - 98 mg. Despite global growth, opioid consumption in the region has remained low for decades. Strict regulatory, financial, and cultural barriers contribute to limited access, resulting in poor pain management, especially for cancer patients.

Saudi Arabia, Bahrain and Kuwait are in the top quartile of regional consumption with values between 5.4 and 7.2 mg per capita, with two countries reporting opioid consumption at 0.9 and one country at 0.2 mg per capita (Fig.2.4). While the regional average appears to be elevated across several countries with higher consumption, this hides deep inequalities in access to pain relief and care [2,9,21].



Source: Walther Global Palliative Care and Supportive Oncology, data 2022

Fig.2.4 Consumption of strong opioids in morphine equivalent, per capita per year

It should be noted that according to the new WHO methodology, countries are divided into four levels based on 14 macro-indicators (policy, access to medicines, education, service delivery and public engagement). These indicators allow for monitoring progress, benchmarking, and identifying gaps in national palliative care systems [3,18-20,28].

The Atlas uses a new four-level system maturity scale:

Emerging (1.00-1.74) - usually have only isolated hospice initiatives, limited access to pain relief, and no state strategy.

Progressing (1.75-2.49) - are actively building health care systems in the country. Integrating medical, psychological, and spiritual services for patients and their families, increasing funding, and creating interdisciplinary teams.

Established (2.50-3.24) - countries with a high level of development, a stable palliative care system.

Advanced (3.25-4.00) - characterized by a consistently developed care system, high productivity and advanced technologies. Hospice services are integrated into national health care systems and broad public involvement.

The level of development of palliative care in MENA countries varies considerably, from a complete lack of formal activity to isolated service provision. Most countries in the region are classified by the WHO typology as having only limited or localized initiatives [2].

None of the MENA countries have reached advanced and stable levels. The highest levels of development in the region (Progressing) are demonstrated by Jordan, Kuwait, Saudi Arabia, Oman, Lebanon, Qatar and Morocco. These countries have a higher number of specialized services and better integration into national health systems.

Emerging: Egypt, Iran, and the United Arab Emirates have basic programs but face limitations in access to painkillers and a shortage of skilled personnel.

Lower levels of activity are demonstrated by: Iraq, Yemen, Syria, Somalia, which are often classified as countries with no or minimal palliative activities due to conflicts and destroyed infrastructure.

Conclusions to chapter 2

As a result of the analysis of the literature, it can be concluded that the organization of effective palliative care for patients in need in the countries of the

Middle East and North Africa depends on many factors. This is due to the fact that the regions have significant differences in the level of development of the health care system and society, as well as differ from each other in terms of political system and general level of literacy of the population. All this creates significant difficulties in implementing the generally recognized principles of humanism in the organization of treatment and social rehabilitation of people.

It can be argued that the solution to the problem of palliative care in the region lies not only in the professional sphere, these issues are directly related to armed conflicts and population displacement, which in many countries significantly complicate the work of healthcare systems and increase the number of people in need of palliative support.

A systematic review of national palliative care programmes and strategies in the region found that palliative care is generally underdeveloped: by 2024, 82% of countries (18/22) had isolated or no known provision of services, and less than 1% of the 3.2 million patients receiving care annually. Key gaps include low availability of opioids, limited education, and a lack of national strategies, although some regional network initiatives are already underway.

Analysis of the researched sources showed that most countries in the region are classified as having isolated or limited palliative care services, often classified as average on a 4-level scale (new, progressive, established, developed). Although the need for palliative care is high due to chronic diseases, only about 1% of the 3.2 million people in the Eastern Mediterranean who need palliative care actually receive it. Key barriers include the lack of a national policy, insufficient access to essential pain medications, inadequate training of health workers, and low public awareness.

CHAPTER 3

RESEARCH ON APPROACHES TO IMPLEMENTING A NATIONAL PALLIATIVE CARE STRATEGY IN MOROCCO

3.1 Current epidemiological situation with serious diseases in Morocco

The problem of increasing numbers of people in need of palliative care is common to most countries worldwide. This issue is also relevant for Morocco.

Health policy in recent years has been general, with no proposed policy solutions directly addressing life-threatening illnesses or end-of-life care, and there has been no organized effort in the medical community to raise awareness of palliative care policies. WHO estimates that more than 163,000 Moroccans need PCs every year [2,8,10].

In the early 90s, palliative care was absent in the country, and oral morphine was first used only in 1995. The Moroccan Society of Pain and Palliative Care opened in 1996 and it was not until ten years later (2005) that the first palliative care unit affiliated with the National Cancer Institute opened in Rabat [7]. In 2010 and 2012, the first separate national health policies set out a vision for the development of palliative care, but the targets were very ambitious, with the aim of supporting 100% of cancer patients in need of palliative care by 2019, and were therefore not achieved. There was also no clear guidance on who was responsible for implementation and monitoring progress. Palliative care education was first included as a compulsory module in the undergraduate medical curriculum in 2015 [29-31]. It should be noted that in recent years, palliative care has become a national priority in the region, which is especially weak in the development of palliative care services.

One of the first steps towards improving the efficiency of the organization of palliative care for patients was the submission of a national report. The development of disease prevention indicators was presented, reflecting the progress made in each

area and providing a summary of the level of implementation. Morocco has guidelines for disease prevention in noncommunicable diseases and includes prevention services in its national health policy [10].

Morocco does not have a single National Palliative Care Strategy. The country is improving its health system by integrating palliative care into its “Health Plan 2025” and the National Cancer Plan (2020–2029), broader strategies to combat noncommunicable diseases (NCDs) aimed at achieving universal health coverage by 2030 and partially ensuring access to pain management, including oral morphine [30].

After analyzing the main documents, we identified the main milestones in the development of palliative care in the country (tabl.3.1).

Table 3.1

Palliative Care Development Roadmap [27,31]

Data	**Description of the event**
1994	The first data on the prevalence and treatment of pain in Morocco have become available
1996	The Moroccan Society of Pain and Palliative Care was created
1999	The 3rd Euro-Maghreb Conference on Pain Management and Palliative Care was held in Marrakech
2005	The first personal computer department is opened in Rabat, linked to the National Cancer Institute; integrating palliative care for cancer patients into outpatient and inpatient services.
2010	Separate national health policies laid out a vision for the development of PC
2012	A pilot project has been launched to provide assistance to cancer patients in emergency situations by mobile teams
2015	Changes to the outdated and restrictive 1922 law on the deregulation of morphine

Morocco is actively cooperating with the World Health Organization and the African Association of Palliative Care to expand the network of services.

Established in 1995 at the National Institute of Oncology in Rabat, the Moroccan Society for the Treatment of Pain and Palliative Care is a key body involved in the training of specialists and the development of standards of care. This designated center provides one-stop palliative care services in Morocco [31].

The Moroccan Academy of Pain and Palliative Care is a professional organization that conducts scientific events, in particular international congresses on interventional pain management.

The National Institute of Oncology, which is located in Rabat, opened the first of the few specialized palliative care departments in the country [30].

The Lalla Salma Foundation plays an important role in advocating for the rights of cancer patients and supporting national cancer control plans that include palliative elements [30,31].

Morocco's approach to the development of palliative care is markedly limited, with an almost complete lack of laws and regulations in this area. Despite some progress, palliative care remains fragmented and underdeveloped, with persistent disparities in its availability and delivery.

Although palliative care is not yet considered a public health need in the country and therefore not included in the health program, several initiatives and best practices have been developed in the region, but the coverage of services has been largely limited, and they have not been fully integrated into the national health strategy.

In order to solve problems in the field of palliative care, the Moroccan Ministry of Health has been working to officially recognize palliative care as a medical specialty.

One promising approach to improving the effectiveness of palliative care provided to the above-mentioned patient groups is the active development of infrastructure, including specialized hospitals and other facilities, and medications used for severe pain. The results of an analysis of current strategies in Morocco are

crucial in developing such programs. Nearly all medical infrastructure facilities are part of the WHO-Morocco collaboration. This has determined the need for further research in this area.

3.2 Analysis of the National Palliative Care Strategy in Morocco and its compliance with WHO standards

In 2015, Morocco ranked 52nd out of 80 countries in the Economist Intelligence Unit's Quality of Death Index, which measures the quality of palliative care, its availability and accessibility for terminally ill patients. Overall, the country scored 33.8%, ranking 4th in Africa at the time [2,29].

Currently, Moroccan health statistics lack a comprehensive approach that provides detailed, systematic, and organized information on mortality, morbidity, prevalence of life-threatening conditions requiring palliative care, distribution by region, time period, etc. The transformations that are currently observed in the field of health care and provision to patients in need have a significant impact on the integration of palliative care into the national HCS in Morocco. In recent years, Morocco has taken significant steps to include palliative care in its services [27,29].

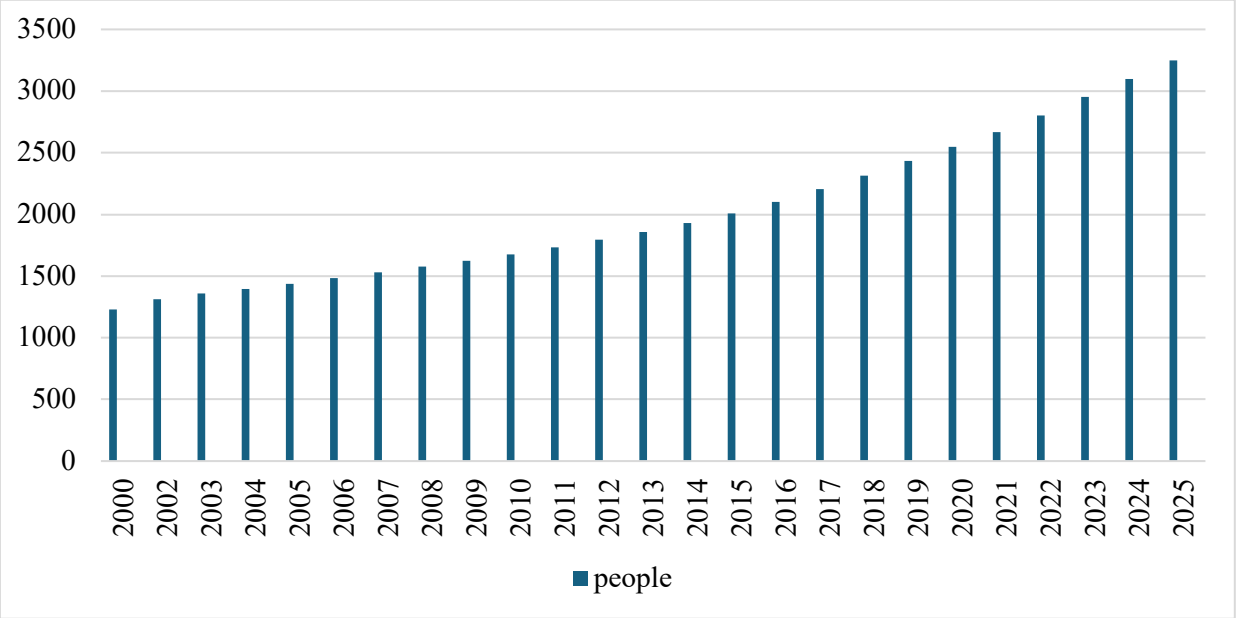
Integrated palliative care involves the integration of administrative, organizational, clinical and service aspects in order to ensure continuity of care between all health and social care sectors involved in the network of care for patients receiving PC.

The object of our study was the data presented on the official website of Morocco and in the Atlas of Palliative Care in the Eastern Mediterranean [16,29]. We investigated the following indicators:

- evolution of the population aged 60 years and over in the last 20 years;
- the level and structure of morbidity and prevalence of diseases
- advocacy and policy statements;
- drug availability, opioid consumption in morphine equivalents (ME), mg/person;

- education and training of personnel in the field of palliative care;
- complex indicators for assessing the quality of work of palliative care institutions and much more detailed data on human resources;
- availability and quality of specialized services needed to provide PC.

In assessing the level of PC, an important role is played by the inclusion of basic indicators of the socio-economic state of the population (number and age of the population, population density, area of medical districts, number of doctors per 1,000 inhabitants, healthcare expenditures per unit of population). The results of a study based on statistical sources showed that Morocco's population was approximately 38.43 million at the beginning of 2025 [27]. The population aged 65 and over has more than doubled in the last 20 years, from 1.2 million in 2000 to over 3.2 million in 2025. This demographic transition means that older people now account for 9.8% of the total population [. The aging population is exacerbating the situation with Parkinson's disease, leading to repeated exacerbations of degenerative diseases and the need for palliative care. This social group is one of the main categories in need of palliative care, due to the prevalence of chronic diseases, age-related changes and cognitive impairment. The trends in the demographic changes in Morocco are shown in fig.3.1 [8].



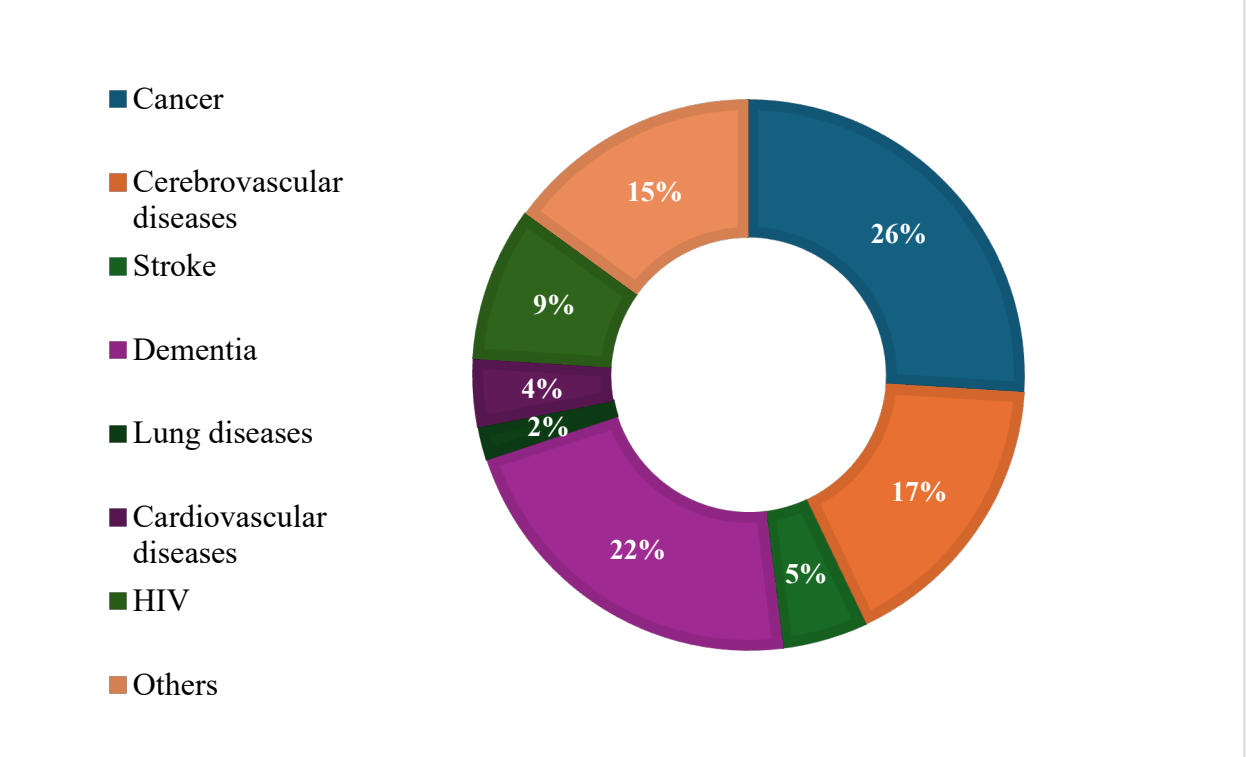
Source: World Population Prospects UN

Fig.3.1 Population ages 65 and above | Morocco

Like other African countries, Morocco is also going through an epidemiological transition characterized by the coexistence of both infectious and chronic diseases.

Some countries have an official list of diseases that require palliative care. Morocco does not have such a list, but World Health Organization estimates and Ministry of Health data are used to assess the need for PC.

According to the WHO, for 2025, more than 165,000 Moroccans need palliative care annually due to chronic diseases such as advanced cancer, cardiovascular diseases, neurological disorders, victims of traffic accidents, HIV diseases and others (fig.3.2) [8,27,31].



Source: The Lancet Commission on Global Access to PC and Pain Relief.

Fig.3.2 Serious illnesses requiring palliative care, 2025

Most adults who need such care suffer from non-communicable diseases, which cause almost 85% of all deaths in the country. Oncological and Cardiovascular diseases belong to the main categories and account for about 26 and 22% of cases, respectively [30].

National statisticians pay considerable attention to the available medical palliative resources in the country. This applies to both the existing infrastructure and human resources — both directly involved in the provision of palliative care and in the educational, research and administrative component. In general, in the context of available medical resources, the following information is usually presented [31]:

- Availability of palliative beds (total number by country and by individual regions and types of palliative care providers).
- Use of beds (what proportion (%) of palliative beds were occupied).
- Number of specialists (distribution by qualifications — from doctors to volunteers).
- Employment of specialists is hourly, including work in palliative care groups.
- Availability and quality of specialized services needed to provide palliative care.

Palliative care in Morocco is extremely limited, with only three specialized centers in Rabat and Casablanca. The total number of specialized palliative beds nationwide is estimated to be extremely low — historically, the only state-certified department in Rabat has only 10 beds, which is 0.04 per 100,000 inhabitants [29-31].

Unfortunately, the service is not sufficiently developed and is mostly focused on cancer and does not cover the treatment of non-oncological diseases.

Despite the voluntary state-assigned responsibilities and the expansion of training, actual access to care remains limited. With 18 teaching faculties, 12 stationary units and 26 mobile teams, calculated as a coefficient (0.03/100,000 inhabitants). Training in PC is available in 3 out of 18 medical schools, but this specialization still needs recognition for doctors.

In collaboration with WHO, Morocco has established palliative care units in all university hospitals and regional cancer centers, and has deployed mobile teams to provide home care.

The organization of palliative care takes into account existing care services at different levels (table 3.2) [10,29,30].

Table 3.2

Types of Service Providers

Provider type	**Description and scope of activities**
Public hospitals	Major palliative care centers integrated into tertiary level oncology facilities (Rabat, Casablanca). Provincial/Prefectural Hospital Center
Mobile Units	Organized with the support of the WHO and the Ministry of Health. They operate in the provinces of Agadir, Tiznit, Beni Mellal and Errashidiya to serve patients at home.
Public sector	The Lalla Salma Foundation plays a key role in funding the treatment and support of patients. The Dar Zhor Association provides psychosocial support.
Private sector	It is mainly represented in Casablanca and Rabat, where palliative care is provided as part of paid oncological treatment.
Specialized centers for pediatric oncology and hematology	6 centers in Casablanca, Rabat, Fez, Ujda and Marrakech

Expanding the training of health professionals in palliative care is one of the 6 strategic goals of country. Over the past five years, the Ministry of Health of Morocco has introduced certified continuing education programs in palliative care for healthcare professionals with modules integrated into medical training curricula. The Faculty of Medicine and the Faculty of Pharmacy in Marrakech have implemented a four-day palliative care training program for sixth-year medical

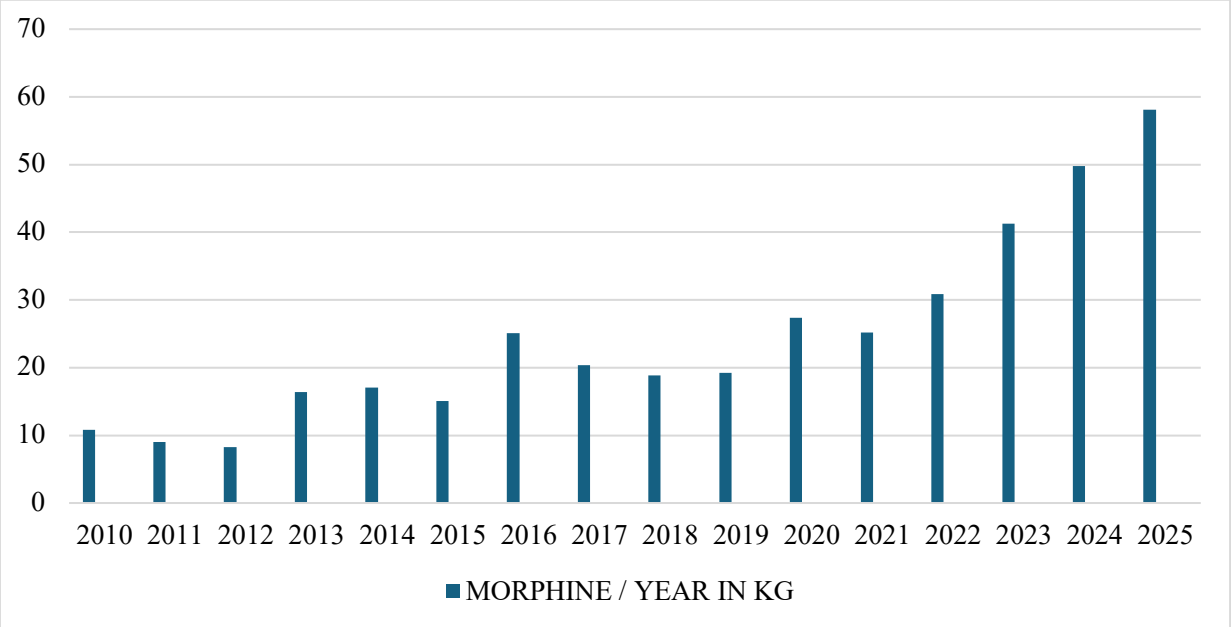
students over the past five years, which combines theoretical training with simulation-based practical sessions [10,29-31].

• Continuing Education (2015–2019) – Thematic Certifications at CHU Casablanca.

• University Programs: Master's Degree (Nursing); University diplomas (doctors – 152 hours of theory, 28 hours of palliative care, 40 hours of clinical practice).

According to the WHO's overall health development model, ensuring access to medications, primarily opioids, is considered a priority in the development of palliative care: import quotas, cost, prescriptions, availability in pharmacies, dispensing information, and methods of administration.

Ensuring access to pain management at all levels of care is a key indicator of pain prevention. Access to essential medicines for pain and other symptoms includes access to opioids, which are essential for the control of severe pain. As pain is the main symptom treated in palliative care services, morphine is prescribed in over 56% of all cases. Morphine consumption has increased significantly over the past fifteen years. It increased fivefold between 2010 and 2025 (from 10 to 58 kg) (fig.3.3) [21,29,30].



Source: Walther Global Palliative Care and Supportive Oncology

Fig.3.3 Morphine consumption/year in kg in Morocco (2010 – 2025)

Annual opioid consumption is 1.34 milligrams per person per year, and few patients requiring palliative care have access to oral morphine. Although the validity period of a morphine prescription was extended from 7 to 28 days in 2014, access to the drug remains limited due to strict regulations. Only a small percentage of doctors prescribe opioids [6, 21,29,30].

In Morocco, the availability of essential medicines for pain relief and PC at the primary level of health care is characterized by significant discrepancies between official lists and the actual state of stocks, as well as significant shortages of strong opioids.

Although the main drugs from the national list (such as paracetamol, ibuprofen and diclofenac) are often prescribed and theoretically available free of charge in public primary care centers, in practice patients often face shortages. Studies show that about 35% of essential drugs may be missing from government agencies.

The May 2024 report, prepared by the ATLANTES Global Observatory in conjunction with the Ministry of Health, assesses the development of palliative care in Morocco according to WHO indicators. The Ministry of Health and Social Protection has developed a practical guide and a national system for assessing palliative care according to 14 WHO indicators, which are organized according to six dimensions of the conceptual framework [2,3,30].

The development of palliative care is assessed using a 4-point WHO scale.

Level 1: No identified palliative care.

Level 2: Early stages of development (some initiatives are in place).

Level 3: Early stages of integration (palliative care is becoming part of the health system, regulated by orders, access to morphine is expanding).

Level 4: Active integration (palliative care is available in many institutions, is part of general medical care, multidisciplinary teams are actively working).

After reviewing this literature, we summarized the ranking of palliative care in Morocco for each major achievement and challenge according to criteria including policy, implementation, medication, and education (tabl. 3.3) [2,3,29-30].

Table 3.3

Evaluation system	Indicators														
	The existence of groups dedicated to promoting the rights of patients who require SC	Existence of national policy, legal framework	Existence of a public health strategy at the national level	Inclusion of PC in the list of MS provided at the primary care level	The existence of a national coordinating body for PHS	Existence of congresses or scientific meetings at the NL	Research on PHS in a country: an assessment based	Annual reported opioid consumption in EMO per	Availability of essential pain and multiple sclerosis drugs	General availability of immediate-release oral morphine	Share of medical schools and nursing institutes that integrate SP training	CPE in healthcare for healthcare professionals	Possession of a DES in Palliative Medicine, intended for physicians	Number of specialized teams relative to population	Number of specialized pediatric teams relative to population
No										X					X
Early		X					X 0.04/ 100th	X 1.34mg				X 3/18 3/26		X initial	
Established			X		X								X		
Advance	X			X		X initial			X 100%		X 18/18 0/26				

Conclusions to chapter 3

As a result of the study of data presented in the specialized literature, as well as in the legislative framework regulating the issue of palliative care, we have established the following: palliative care in Morocco has been officially recognized as an independent specialty since 2016.

Although the need for palliative care has always existed, several factors have been identified that make the palliative care situation critical today.

Aging population: over 10% of Moroccans are over 60 years old, and this figure is constantly increasing.

Increase in chronic diseases: cancer is now the second leading cause of death in the country.

Lack of specialized infrastructure: Morocco has only 0.03 palliative care units per 100,000 inhabitants, well below international recommendations.

There are 12 inpatient palliative care units and 26 mobile units providing palliative care at home, but there are still no specialized pediatric programs at the national level.

Limited access to opioids: the annual consumption of morphine is 1.34 mg per capita, while the recommended global average is 10 mg.

Palliative care remains fragmented and focused mainly at the tertiary level (cancer centers). At the community and primary level, PC services and related medicines are practically absent, with the exception of some pilot projects.

In 2010, Morocco incorporated PC into national health policies, including the National Plan for the Prevention and Control of Cancer and the National Multisectoral Strategy for the Prevention and Control of NCDs 2019–2029. The services are included in the minimum package of health care provided at the primary care level, but there is still no mechanism to monitor access to these services. Despite the lack of a national body to coordinate PD within the MHth, PC is integrated separately into the activities of various departments of the Department of Noncommunicable Diseases.

GENERAL CONCLUSIONS

1. The theoretical foundations of palliative care were studied and the components of a comprehensive system of palliative services were established, which are responsible for meeting the physical needs of the patient caused by the existing disease through professional care, symptomatic treatment, and effective pain relief.
2. It was found that all documents adopted over the past decades that call for the establishment of palliative care networks; the development of external consultations on palliative care; and the institutionalization of pain management at all levels of the health care system are based on WHO recommendations.
3. The prevalence of irreversible incurable conditions in the structure of diseases of palliative elderly patients in the world has been determined.
4. Based on the systematization of data from specialized literature, the main features of the organization of palliative care for those in need in the countries of the Middle East and North Africa, including Morocco, were identified.
5. The level of provision of specialist palliative care services per 100,000 inhabitants in countries of the Middle East and North Africa was examined.
6. Priority areas for the development of Moroccan healthcare in the area of providing palliative care to the population have been identified.
7. It is recognized that palliative care is still not sufficiently integrated into national health strategies, and the legislative framework will require further development. Morocco is demonstrating significant progress in line with previous trends, but assistance is becoming fragmented and uneven.
8. A comparative assessment of per capita morphine consumption over 15 years in Morocco was conducted.
9. An assessment of the level of development of palliative care in Morocco was conducted using a methodology supported by the World Health Organization, depending on the degree of integration of care into the national health system.

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Ф А 2.2.1–32-366

National University of Pharmacy

Pharmaceutical faculty
Department of social pharmacy
Level of higher education master's
Specialty 226 Pharmacy, industrial pharmacy
Educational and professional program Pharmacy

APPROVED
The Head of Department
of Social Pharmacy

_____
Alina VOLKOVA
"05" of September 2025

ASSIGNMENT
FOR QUALIFICATION WORK
OF AN APPLICANT FOR HIGHER EDUCATION

Samari YAHYA

1. Topic of qualification work: «Analysis of problems in organizing effective palliative care for patients in Morocco », supervisor of qualification work: Lyubov TERESHCHENKO, PhD, associate professor, approved by order of NUPh from "06" of October 2025 № 266

2. Deadline for submission of qualification work by the applicant for higher education: May2026 year.

3. Outgoing data for qualification work: authors' publications; media publications; official health sites; State Statistics Service of the world; sites of WHO, IFD, Internet, etc.

4. Contents of the settlement and explanatory note (list of questions that need to be developed): analyze the theoretical foundations of the functioning and regulation of the palliative care; to consider the main barriers in the organization of palliative care; analysis of palliative care organization in MENA countries; to study of current epidemiological situation in Morocco; to analyze the National Palliative Care Strategy in Morocco according to WHO standards.

5. List of graphic material (with exact indication of the required drawings):
Tables – 11, schemes – 10.

6. Consultants of chapters of qualification work

Chapters	Name, SURNAME, position of consultant	Signature, date	
		assignment was issued	assignment was received
1	Lyubov TERESHCHENKO, associate professor of higher education institution of department of social pharmacy	11.09.25	11.09.25
2	Lyubov TERESHCHENKO, associate professor of higher education institution of department of social pharmacy	21.11.25	21.11.25
3	Lyubov TERESHCHENKO, associate professor of higher education institution of department of social pharmacy	24.12.25	24.12.25

7. Date of issue of the assignment: «05 » of September 2025 year.

CALENDAR PLAN

№ з/п	Name of stages of qualification work	Deadline for the stages of qualification work	Notes
1	Analysis of scientific, periodical literature on the topic of qualification work	September 2025	**done**
2	To analyze the theoretical foundations of the functioning and regulation of the palliative care	October – November 2025	**done**
3	To investigate key aspects of the organization of palliative care in MENA in modern conditions	December – January 2025 – 2026	**done**
4	To study the level of implementation of palliative care and assess the Moroccan National Palliative Care Strategy using WHO indicators	February – March 2026	**done**
5	Registration of a qualification work according to the general requirements	April 2026	**done**
5	Preparation of the report and multimedia presentation in official protection of a master's thesis	May 2026	**done**

An applicant of higher education_____ Samari YAHYA

Supervisor of qualification work _____ Lyubov TERESHCHENKO

ВИТЯГ З НАКАЗУ
По Національному фармацевтичному університету

«06» жовтня 2025 р. **№ 266**

Фармацевтичний факультет

Затвердити теми кваліфікаційних робіт здобувачам вищої освіти 5 курсу 2025-2026 н. р., група Фм21(4,10д)англ-01, освітньо-професійна програма «Фармація», спеціальність «226 Фармація, промислова фармація», галузь знань «22 Охорона здоров'я», рівень вищої освіти другий (магістерський), денна форма здобуття освіти, термін навчання 4 роки 10 місяців, мова навчання англійська.

Прізвище, ім'я здобувача вищої освіти	Тема кваліфікаційної роботи (українською мовою)	Тема кваліфікаційної роботи (англійською мовою)	Керівник кваліфіка-ційної роботи	Рецензент кваліфіка-ційної роботи
Кафедра соціальної фармації				
Самарі Яхья	Аналіз проблем організації ефективної паліативної допомоги пацієнтам у Марокко	Analysis of problems in organizing effective palliative care for patients in Morocco	доц. Терещенко Л. В.	доц. Бондарева І. В.

Підстава: подання декана фармацевтичного факультету доцента Олександра ГОНЧАРОВА

Ректор
Вірно. Секретар

НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ * УКРАЇНА * ФАРМАЦЕВТИЧНИЙ ФАКУЛЬТЕТ № 02010936 МІСТО ХАРКІВ

ФА2.8-03-317

ВИСНОВОК

експертної комісії про проведену експертизу

щодо академічного плагіату у кваліфікаційній роботі

здобувача вищої освіти

«11» квітня 2026 р. № 333569928

Проаналізувавши кваліфікаційну роботу здобувача вищої освіти САМАРІ Яхья, групи Фм21(4,10д)англ-01, спеціальності 226 Фармація, промислова фармація, освітньої програми «Фармація» очної (денної) форми здобуття освіти на тему: «Аналіз проблем організації ефективної паліативної допомоги пацієнтам у Марокко / Analysis of problems in organizing effective palliative care for patients in Morocco», експертна комісія дійшла висновку, що робота, представлена до Екзаменаційної комісії для захисту, виконана самостійно і не містить елементів академічного плагіату (компіляції).

Заступник голови Комісії,
заступник директора інституту
в складі ЗВО ННІПФ,
доцент Олена НОВОСЕЛ

Ф А 2.2.1-36-353

REVIEW

of scientific supervisor for the qualification work of the master's level of higher education of the specialty 226 Pharmacy, industrial pharmacy

Samari YAHYA

on the topic: **«Analysis of problems in organizing effective palliative care for patients in Morocco»**

Relevance of the topic. The issue of palliative care is crucial to improving the quality of life of patients and their families facing serious illnesses. Palliative care is of utmost importance due to the aging population and the increase in chronic diseases, offering holistic care that, while often supportive at the end of life, is increasingly integrated in the early stages of illness alongside curative treatments. This direction is currently actively developing in the world, but in many developing countries, this issue poses many problems.

Practical value of conclusions, recommendations and their validity. The practical value of the study lies in its comprehensive and scientifically sound assessment of the National Strategy for Palliative Care in Morocco. The work identifies both strengths and weaknesses in the level of implementation of palliative care in countries, including Morocco, which directly affects patient safety. A clustering of the main barriers to the organization of palliative care was carried out. Ways of improvement were identified to overcome these problems.

Assessment of work. The graduate student has demonstrated strong analytical skills and academic maturity throughout the research process. The work is logically structured, methodologically sound, and thoroughly referenced. It combines statistical analysis, policy review, and strategic evaluation, and offers innovative ideas for improving the role of palliative care in the National Health Policy. The author has demonstrated a clear understanding of the topic.

General conclusion and recommendations on admission to defend. In general, the qualification work of Samari YAHYA on the topic: «Analysis of problems in organizing effective palliative care for patients in Morocco» is performed at the proper level, meets the requirements of the "Regulations on the preparation and protection of qualification works at the National University of Pharmacy" and can be recommended for defense in the Examination commission.

Scientific supervisor _____ Lyubov TERESHCHENKO

«11» of May 2026

Ф А 2.2.1-36-356

REVIEW

for qualification work of the master's level of higher education, specialty 226 Pharmacy, industrial pharmacy

Samari YAHYA

on the topic: **«Analysis of problems in organizing effective palliative care for patients in Morocco»**

Relevance of the topic. The goal of palliative care is to alleviate the suffering of patients and their families through comprehensive assessment and treatment of the physical, psychosocial and spiritual symptoms experienced by patients. Palliative care today is not only the final stage of life, but also active support for the patient during a serious illness. The relevance of palliative care is due to the increasing number of incurable patients, the aging population, need to ensure human dignity.

Theoretical level of work. The qualification work is a theoretical generalization and solution to a scientific problem that underlies modern approaches to palliative care and is of great importance for improving the experience of providing palliative care to incurable patients in all countries of the world.

Author's suggestions on the research topic. The work concludes that the implementation of palliative care is important for the modern healthcare system. The concept of "primary palliative care", its components and the importance of legislative regulation to ensure the availability of palliative care are defined.

Practical value of conclusions, recommendations and their validity. Despite the obvious relevance of the problems investigated in this qualification work, it can be noted that this topic is insufficiently covered both in domestic science and in journalistic publications. Thus, the research direction of Yahya SAMARI' work is relevant and has practical significance.

Disadvantages of work. Some minor stylistic inconsistencies and occasional language issues are present, but they do not significantly affect the overall quality or comprehension of the research.

General conclusion and assessment of the work. According to the relevance and the results of the research qualification work of Samari YAHYA on the topic: «Analysis of problems in organizing effective palliative care for patients in Morocco» meets the requirements for master's works and can be recommended for official defense in the Examination commission.

Reviewer _____ Irina BONDAREVA

«12» of May 2026

Ф А2.2.1-36-230

ВИТЯГ

з протоколу засідання кафедри соціальної фармації

№ 15 від «13» травня 2026 року

ПРИСУТНІ: зав. каф. доц. Волкова А.В., доц. Болдарь Г.Є., доц. Дядюн Т.В., проф. Котвіцька А.А., проф. Назаркіна В.М., доц. Ноздріна А.А., проф. Панфілова Г.Л., доц. Сурікова І.О., доц. Терещенко Л.В.

ПОРЯДОК ДЕННИЙ: Про представлення до захисту в Екзаменаційній комісії кваліфікаційних робіт.

СЛУХАЛИ: завідувачку кафедри доц. Волкову А. В. з рекомендацією представити до захисту в Екзаменаційній комісії кваліфікаційну роботу здобувача вищої освіти спеціальності 226 Фармація, промислова фармація Самарі Яхья на тему: «Аналіз проблем організації ефективної паліативної допомоги пацієнтам у Марокко».

Науковий керівник: к. фарм. н., доцент кафедри СФ Терещенко Л.В.

Рецензент: к. фарм. н., доцент кафедри ММЗЯФ Бондарева І.В.

ВИСТУПИЛИ: доц. Болдарь Г.Є., доц. Ноздріна А.А., доц. Сурікова І.О. висловили рекомендації до кваліфікаційної роботи Самарі Яхья

УХВАЛИЛИ: Рекомендувати до захисту в Екзаменаційній комісії кваліфікаційну роботу здобувача вищої освіти Самарі Яхья на тему: «Аналіз проблем організації ефективної паліативної допомоги пацієнтам у Марокко».

Завідувачка каф. СФ, доцент _____ Аліна ВОЛКОВА

Секретар, доцент _____ Альміра НОЗДРІНА

Ф А2.2.1-36-042

НАЦІОНАЛЬНИЙ ФАРМАЦЕВТИЧНИЙ УНІВЕРСИТЕТ

ПОДАННЯ
ГОЛОВІ ЕКЗАМЕНАЦІЙНОЇ КОМІСІЇ
ЩОДО ЗАХИСТУ КВАЛІФІКАЦІЙНОЇ РОБОТИ

Направляється здобувачка вищої освіти Самарі Яхья до захисту кваліфікаційної роботи за галуззю знань 22 Охорона здоров'я
спеціальністю 226 Фармація, промислова фармація
освітньо-професійною програмою Фармація
на тему: «Analysis of problems in organizing effective palliative care for patients in Morocco».

Кваліфікаційна робота і рецензія додаються.

Декан факультету _____ / Олександр Гончаров /

Висновок керівника кваліфікаційної роботи

Здобувач вищої освіти Самарі Яхья під час виконання кваліфікаційної роботи вивчил і проаналізувал значний обсяг літератури та нормативно-правових актів по темі. Проведений аналіз підтверджує актуальність досліджень і висуває необхідність їх проведення.

Керівник кваліфікаційної роботи _____ Любов ТЕРЕЩЕНКО

«11» травня 2026 р.

Висновок кафедри про кваліфікаційну роботу

Кваліфікаційну роботу розглянуто. Здобувач вищої освіти Самарі Яхья допускається до захисту даної кваліфікаційної роботи в Екзаменаційній комісії.

Завідувачка кафедри
соціальної фармації _____ Аліна ВОЛКОВА

«13» травня 2026 р.

Qualification work was defended

of Examination commission on

« 09 » __June___ 2026 year

With the grade _____

Head of the State Examination commission,

DPharmSc, Professor

_____ / Volodymyr YAKOVENKO /