

Geriatric-Palliative Care Units Model for Improvement of Elderly Care

Nada Tomasović

Health Center Dubrovnik, Dubrovnik, Croatia

ABSTRACT

The aim of this research was to indicate the necessity of a new organizational model of health and social care system for the geriatric population in Croatia. Modern geriatrics puts special emphasis on the idea that the care of the elderly should be performed through home care or long-term care institutions, rather than in the acute care hospital departments. The social healthcare of the elderly requires a multidisciplinary approach, as well as teamwork and coordination of institutional and non-institutional departments. Founding of palliative care units is clearly absent from the existing elderly care system. 33% of the total deceased geriatric population within the target area (2000–2002) has passed away in institutions (Dubrovnik General Hospital and nursing homes), what clearly indicates a need for organized palliative care on the stationary level. Nursing homes in Croatia should accept about 4% of the total number of older population (according to the gerontology research). Nevertheless, this research shows that the available capacity of the nursing homes in the Dubrovačko-Neretvanska County is 50% of the projected percentage. The solution might be setting up of palliative-geriatric units in already existing institutions, as shown by the SWOT analysis.

Key words: palliative care, geriatric, model of elderly care

Introduction

Socio-demographic indicators of aging in Croatia clearly show that there are 15.6% of the elderly (age 65 and over) in the entire population¹. Due to such demographic reality and all its implications, the organization of the health and social care system for the elderly is becoming even more demanding.

History of medicine in ancient Dubrovnik provides a comprehensive overview of how to combine health and social services, especially in regard to the older population^{2,3}. At the beginning of the 14th century, Dubrovnik already had several hospitals, which were used as shelters for the elderly and the poor. Famous Dubrovnik hospital »Domus Christi« was established in 1347. Later, in 1540, it was transformed into a public state hospital, one of the first in Europe⁴. Such a respectable tradition in health care culture requires continuity and integration with all the progressive world trends.

Modern medicine is characterized by an all-encompassing and holistic care for older people. It recognizes their needs, and applies the knowledge from geriatrics and gerontology. The geriatric population is defined by

age, but it is not a homogenous group. Geriatrics becomes relevant in a specific life stage when aging induced changes become obvious and start to affect health⁵. Therefore, the notion of a »geriatric patient« will not be strictly confined to age, although it formally refers to persons over 65 years of age.

In many European countries geriatrics is an independent field of medicine or a subspecialty of internal medicine⁶. The Croatian health care system does not foresee organization models that would put sufficient emphasis on geriatrics. However, the number of hospitalized elderly patients and duration of their hospitalization compared to younger age groups clearly shows the need for new organizational solutions within the health care system. The modern trends in the developed world support treatment of the elderly more often in their homes or in long-term care institutions, rather than in acute-care hospitals⁵.

Average hospitalization duration for persons aged over 65, compared to the persons below 65, in the Dubrovnik General Hospital was more than 40 % (2000–2002)⁷. During the analyzed period, number of

beds available for hospitalization (without pediatrics, neonatology and birth centers) at the Dubrovnik General Hospital was 225 (source: Institute for Public Health of the Dubrovačko-Neretvanska County). At the same time, persons older than 65 years accounted for 32.6 % of all hospitalized persons in the Dubrovnik General Hospital⁷. For comparison purposes, the statistical information for Croatia indicates that persons aged over 65 accounted for 30.7 % of all hospitalized in 2001¹. The Croatian long-term elderly care model is based on nursing homes. In 2003, total number of nursing home beds in Dubrovačko-Neretvanska County was only 381 (Source: nursing homes and Institute of Public Health in Dubrovačko-Neretvanska County), with stable average occupancy rate of 100%, due to permanently open waiting lists. According to requirements of the Rules, the nursing homes are grouped in three categories. If a nursing home fails to fulfill the envisaged requirements even for the third category, it should adjust within the period of 5 years⁸. In the year 2003, there were four nursing homes throughout the area of the Dubrovačko-Neretvanska County: two in the City of Dubrovnik and two on the Island of Korčula. The health care practice in these nursing homes relies exclusively on the responsibility of a family physician (urgent medical assistance or transport for specialized examinations are organized when necessary). Geriatric population is recognized as a special interest group for palliative care, especially due to their quantitative presence as potential users of palliative medicine⁹. The palliative care unit programs primarily involve cancer patients, AIDS infected persons, patients with neurodegenerative disorders, geriatrics and pediatrics groups. The palliative medicine provides an optimal quality of life for patients with diseases in advanced stage and limited prognosis¹⁰. The health care systems in many Western countries give the palliative care a firm position¹¹. Under the Health Protection Act the palliative care is integrated with the primary health care, whereas real possibilities of practical use of palliative medicine exist especially on this level¹². The nursing homes quite clearly belong to the sphere of primary medicine, which implies the possibility of organization of in-patient palliative care units in institutions¹³. A nursing home in Netherlands has started a specific palliative care project in the year 1970; where due to a traditional emphasis on home care induces investments in education and general practice support¹⁴. Establishing of palliative-geriatric units in Croatia would allow that the said model be applied to other mentioned groups, foreseen by the palliative medicine program as in-patient hospice units.

The aim of this study was to explain the need and possibilities for introducing the new model of elderly care in Croatia.

Methods

Source of the data were nursing homes in the Dubrovačko-Neretvanska County, and Institute for Public Health of the Dubrovačko-Neretvanska County.

The methods used in the survey were SWOT analysis and descriptive statistics, i.e. average population growth rate in population over 65 years of age for the area of the Dubrovačko-Neretvanska County (1991–2001), the ratio of deceased people over 65 years of age in institutions (nursing homes, Dubrovnik General Hospital) and outside institutions, and percentage of geriatric population situated in nursing homes of Dubrovačko-Neretvanska County (2003).

SWOT is a situation analysis used for defining marketing strategies and business management quality recommendations. In this survey, SWOT analysis was performed by means of a brainstorming procedure by target expert groups. An overview report with the collected data enables comparison between the external opportunities and threats and the internal advantages and weaknesses (in this case creation of geriatric-palliative unit models)¹⁶.

Results

Average population growth rate in population over 65 years of age, for the area of the Dubrovačko-Neretvanska County, in period of 1991–2001 was 2.09% (2.78% male and 1.66% female) (Table 1).

The results showed that out of the total deceased in geriatric population (Dubrovačko-Neretvanska County, 2000–2002), the proportion of those deceased in institutions was 0.33 (Figure 1, Table 2).

According to data, the nursing home capacities in the Dubrovačko-Neretvanska County (2003) enable accommodation of 1.95% of the total geriatric population of that area (Table 3).

TABLE 1
AVERAGE POPULATION GROWTH RATE FOR POPULATION OVER 65 YEARS OF AGE FOR THE AREA OF THE DUBROVAČKO-NERETVANSKA COUNTY (1991–2001)

Census	Total population over 65 (N)	Men over 65 (N)	Women over 65 (N)
1991	15902	5965	9937
2001	19564	7851	11713
Average growth rate	2.09	2.78	1.66%

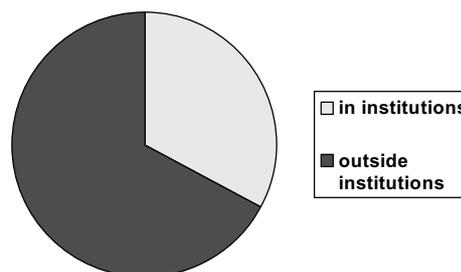


Fig. 1. Deceased population over 65 years of age in/out of institutions in the dubrovačko-neretvanska county (2000–2002).

SWOT analysis clearly shows internal advantages (strength) and favorable external opportunities of setting up geriatric-palliative care units in the institutions (Table 4).

Discussion and Conclusion

Used data shows an upward trend of population over 65 years of age at the area of the present-day Dub-

TABLE 2
DECEASED POPULATION OVER 65 YEARS OF AGE IN INSTITUTIONS IN THE DUBROVAČKO-NERETVANSKA COUNTY (2000–2002)

Period	Deceased geriatric population Total (1)	Deceased geriatric population in Dubrovnik General Hospital (2)	Deceased geriatric population in nursing homes (3)	Deceased geriatric population in institutions (2+3)	Proportion of geriatric population deceased in institutions (2+3)/1
2000–2002	2924	665	293	958	0.33

Statistical data source: Institute for Public Health of the Dubrovačko-Neretvanska County and nursing homes in Dubrovnik

TABLE 3
NUMBER OF ELDERLY IN THE NURSING HOMES OF DUBROVAČKO-NERETVANSKA COUNTY (2003)

Nursing homes of Dubrovačko-Neretvanska county	Nursing home »Domus Christi«	Nursing home Dubrovnik	Nursing home Vela Luka	Nursing home of Korčula	Percentage of geriatric population in nursing homes Dubrovačko-Neretvanska County
Number of elderly	94	168	76	43	2%

Statistical data source: Institute for Public Health of the Dubrovačko-Neretvanska County and nursing homes in Dubrovnik

TABLE 4
SWOT ANALYSIS (STRENGTHS, WEAKNESS, OPPORTUNITIES AND THREATS OF SETTING UP GERIATRIC – PALLIATIVE CARE UNITS IN THE INSTITUTIONS):

INTERNAL FACTORS ANALYSIS	
Strengths	Weakness
<ul style="list-style-type: none"> • Geriatric patients in terminal stages have needs which fall within the domain of palliative care, even when they are placed in institutions, • Setting up of geriatric-palliative units in institutions would decrease the occupation ratio of the »acute« beds in hospitals, • A per day placement price in nursing homes is much lower than in hospitals, therefore the placement price in palliative-geriatric units would be much lower than in hospitals, • The geriatric-palliative units model represents a headstone for elderly and palliative care development in the field of social-health care, • The enforcement of ethical principles and team work are in accordance with western standards, • The existing multi-disciplinary teams in nursing homes. 	<ul style="list-style-type: none"> • There is no widely accepted practice of organized forms of palliative care within the primary level of health care, • Insufficient number of educated and equipped personnel for palliative care,
EXTERNAL FACTORS ANALYSIS	
Opportunities	Threats
<ul style="list-style-type: none"> • Reduction of health care costs, • Legal grounds – palliative care is foreseen as a primary health care measure (geriatric-palliative units would fall, same as nursing homes, within the sphere of the primary health care), • Recognizing the importance of in-patient geriatric-palliative units being faced with lack of »acute« beds and possibility of placement in nursing homes. 	<ul style="list-style-type: none"> • Possible amendments of the Health Protection Act, • Inability of health management to promptly recognize the practical implications of palliative care and geriatrics, • Possibility of different medical experts refusing to accept organized palliative care.

rovačko-Neretvanska County in the period between 1991 and 2001, and indicates a growing need for adequate care for the elderly (Table 1). The research also indicates the need for incorporation of in-patient geriatric-palliative units in the existing elderly care model (Figure 1, Tables 2 and 3). Organizational changes in the form of geriatric-palliative units are supported by the SWOT analysis (Table 4), as well as by the fact that 33 % of the total number of the deceased geriatric population in the target area (2000–2002) has passed away in institutions (Dubrovnik General Hospital and nursing homes). The health care system should be continuously analyzed and judged for quality and efficiency, as well as for its economic features. The outstanding international achievements in health care systems should be applied to our domestic situation only after genuine analyses of specific local social environment have been performed¹⁷. An interdisciplinary approach is needed due to a complex grid of health and social care system forms. The civil society trend towards improving quality of life for elderly people relies on creative and more active, independent and prolific lifestyle without tutorship. An aging population has increasingly become a characteristic of the demographic structure of the Republic of Croatia. In 1991, according to the UN criteria, Croatia belonged among the countries with very old population¹⁸. This demographic information is an argument that clearly supports research projects in gerontology. The aging of the nation should attract interest in planning solutions for the existing and the future geriatric problems. Gerontology research is an extremely complicated issue since it requires a multidisciplinary approach to research into the needs of older people, and planning and evaluating the care for the elderly¹⁹. Gerontology, legislation and »educating« people, that is, highlighting the problems of the older population and undertaking joint efforts may contribute to the development of a more humane medicine for older people²⁰. The modern civil society advocates high-technology medicine, which often fails to achieve desired effect in older population and is frequently replaced by the so-called »personal medicine« capable of facing the problems of living of the elderly²¹.

The cost-effectiveness of the health system depends on fulfilled requirements for comprehensive, coordinated health and social care for the geriatric population. Due to the complexity of the health and social care for the geriatric population, teamwork is inevitable.

According to the determined propositions, which include mobility (physical status), and psychological autonomy, the gerontology indicators on the functional disability of geriatric patients are gaining importance¹. Concept of maximizing the functional independence of older people, as a therapeutic goal, is especially important.

Due to the nature of diseases and specifics in geriatrics, hospital treatment is not expected to be a prominent form of treating, rehabilitation and other care for older people. There is a study to prove that additional

social and health care of geriatric patients reduces the unnecessary hospitalization²². The research in Split-sko-Dalmatinska County shows that high percentage of hospitalization of geriatric population (if it lasted over 14 days) indicates the need for specific changes in hospital treatment of elderly²³.

Expectations from the new strategy of health care for the elderly are justifiably focused on the *matters of organization*. It is necessary to avoid a disintegrated approach and give a leading role in planning and coordination to gerontology centers in close collaboration with the primary health care. In order to create a concept of a high-quality health and social care, it is necessary to re-examine the needs of the older population and adjust level of care to realistic economical potential.

Nursing homes, according to gerontology research, should accept about 4% of the total number of older people¹. In this context, capacity of nursing homes in the Dubrovačko-Neretvanska County is only 50 % of the desirable (Table 3). The demand for available beds in the nursing homes is always higher than the capacities. Therefore, there is an obvious need for a change. Until recently, nursing homes have been dominant social care institutions. However, the results of research conducted in Zagreb show that doctors have more often considered health reasons rather than social reasons as grounds for decisions to admit patients to nursing homes²⁴. In the Dubrovnik General Hospital there is no geriatric unit, hence older people are hospitalized at various departments, depending on the diagnosis and the patient's condition. Also, there are no organized hospices to offer palliative care. The performed research clearly indicates the importance and the significance of institutions (nursing homes and hospital in Dubrovačko-Neretvanska County in the period 2000–2002) in the geriatric population care during their terminal stage. Independently of the diagnosis, which represents the basis and the beginning of the terminal stage, both the patients and their families are potential palliative care services users. The terminal life stage, each personal drama and ethics require certain degree of contribution from the individuals, society, and profession. The application of palliative medicine in cases of patients in terminal stage of life would represent an adequate assistance for both the patients and their immediate family. Palliative medicine integrates doctor's assistance in: a) reducing symptoms, b) psychosocial support to the patients and their families, and c) solving ethical problems of the terminal stage of life²⁵.

Hospice units are designed to support the palliative care in organizations.

Organizing hospice units enables the palliative care in three basic forms; hospital care, daily care, and home care.

In organizing the patient's care in the terminal stage of life, the modern hospice becomes an institution governed by the new philosophy in approach to terminal patients^{26–28}. Social or other health-related causes (symptoms which cannot be treated at home) usually represent

grounds to make decision on admission of patients into hospices. An improvement in health offers a possibility to release the patient to home care, while worsening of the patient's condition is grounds for re-admittance into the hospice. Palliative medicine is recognizable by its psychological and spiritual aspects of treatment¹¹. The need to found hospice units in Croatia is being confirmed on a daily basis. Founding of hospice units would influence the change in attitude, reorganization of health care system and allocation of material resources.

An organizational solution in the field of palliative medicine for geriatric population is seen in the setting up of geriatric-palliative units. Such a model for elderly care, in in-patient form, would also result in application of the palliative care principles on the level of primary health care. Specialized geriatric-palliative care units represent a potential for scientific development and education, and a practical solution for coordinating health and social care. Geriatric-palliative care units represent a new possibility for treating geriatric population, when neither a nursing home nor a hospital could offer an adequate solution.

Such units can be organized as separate departments within the existing hospitals, should the space allow it. However, these departments should have fea-

tures of a nursing home and an option for prolonged treatment and stay.

Geriatric-palliative units can also exist within the nursing homes (preferably in the vicinity of a hospital). The SWOT analysis stresses the possibility of practical use of SO palliative-geriatric units model placement strategies, due to the obvious internal advantages – Strengths and favorable external opportunities¹⁶ (Table 4). The advantage of the presented model is clearly the reduction of occupation of the so-called »acute« hospital beds with the elderly in need of palliative care.

The modern medical and social standards today stress the importance of out-of-hospital services for the geriatric population (home care, social and medical institutions for daily care, services for the elderly, etc.), which represents a recommendation for development of the Croatian elderly care model^{28,29}.

The role of institutionalizing older people must not be neglected in our social and economic conditions; however it must comply with the actual needs and individual requirements.

Geriatric-palliative units are rational and adequate form of institutionalizing and innovate for the existing elderly care system.

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N. Tomasović

Health Center Dubrovnik, Prijeko 7, 20000 Dubrovnik, Croatia

MODEL GERIJATRIJSKO-PALIJATIVNIH JEDINICA ZA UNAPREĐENJE SKRBI O STARIJOJ POPULACIJI

S A Ž E T A K

Cilj ovog istraživanja je ukazati da Hrvatskoj treba novi organizacijski model zdravstveno-socijalne skrbi za starije ljude. Smjernice moderne gerijatrije upućuju na češće liječenje starijih ljudi u njihovom domu i ustanovama za produženo liječenje, umjesto na bolničkim odjelima za akutna stanja. Zdravstveno-socijalna skrb o starijim ljudima zahtijeva multidisciplinarni pristup, timski rad, te koordinaciju institucijskih i izvaninstitucijskih službi. Formiranje jedinica palijativne skrbi nedostaje u praksi postojećeg modela skrbi za starije ljudi. Palijativna medicina u zemljama Zapada je afirmirani i primjereni način održavanja optimalne kvalitete života pacijenta sa uznapređovalom bolešću, ograničene prognoze. Od ukupno umrle gerijatrijske populacije u periodu od 2000–2002. u Dubrovačko-neretvanskoj županiji, 33% je umrlo u institucijama (Opća bolnica Dubrovnik i Domovi za stare i nemoćne) što ukazuje na potrebu za organiziranom palijativnom skrbi na nivou stacionara. Domovi za stare i nemoćne bi trebali (prema gerontološkim istraživanjima) zaprimiti oko 4% od ukupnog broja starijih ljudi, a rezultati ovog istraživanja (u 2003.) u Dubrovačko-Neretvanskoj županiji pokazuju da su raspoloživi kapaciteti za 50% manji. Rješenje se sagledava u implementaciji palijativno-gerijatrijskih jedinica u već postojeće institucije, što je prikazano SWOT analizom.