Romania

PALLIATIVE CARE NEEDS ASSESSMENT

Marilyn Boggust

MB Healthcare Consultants

21st December 2017

Contents

Romania
Palliative Care Needs Assessment

Section 1 - Introduction

This paper presents the findings and conclusions from the palliative care needs assessment undertaken in Romania in 2016. The purpose of the population based needs assessment was to gather information needed to understand the type and distribution of palliative care services required for the population of Romania to gain the maximum benefit and to provide a baseline for developing a strategy for improving palliative care services in Romania. The scope of the palliative care needs assessment was to:

- determine the palliative care needs in the general population using a population based needs assessment approach
- identify the palliative care services that are currently available in the country
- determine the type and number of services required to meet the palliative care needs
- identify the gaps in palliative care service provision
- identify the challenges and barriers to developing palliative care services in Romania
- summarise the findings and conclusions from the study

- **Acknowledgments**

This needs assessment report has been developed with members from the Palliative Care Technical Working Group and Palliative Care Commission. The author would like to thank all those involved in undertaking the needs assessment and for providing the data and information for this report. Specific thanks are extended to Professor Dr. Daniela Mosoiu, University of Transylvania Faculty of Medicine and Director of National Development and Education, Hospice Casa Sperantei, Malina Dumitrescu, Programme Director/PR and Flavia Hurducas, Study Centre Manager, both from the Department of National Development and Education, Hospice Casa Sperantei.

This report is set out in the following sections:

- Section 1 -Introduction and background
- Section 2 - Country context
- Section 3 - Demographic and epidemiological profiles
- Section 4 - Assessment of palliative care need and services
- Section 5 - Challenges to developing palliative care
- Section 6 –Summary and proposed way forward

- **Background - The Development of Palliative Care**

Palliative care seeks to relieve suffering and improve the quality of life for those with life-limiting conditions. It is a holistic approach that improves the quality of life for patients and their families by addressing the physical, psychosocial and spiritual needs associated with life-threatening illness. The World Health Organisation (WHO) defines palliative care as '*an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual'* [(1)]. The principles of palliative care for adults and children are set out in **Appendix 1.**

Modern palliative care has developed rapidly in western countries in the last part of the twentieth century. During the early 1960s Dr. Dame Cicely Saunders began to forge a modern philosophy of terminal care combining a powerful religious and moral conviction alongside a rigorous approach to observation, research and clinical innovation. Her vision for improving the care of the dying encompassed the physical, psychological, social and spiritual domains. By listening to patients' stories of illness and suffering Dr. Saunders evolved the concept of *'total pain'*. This view of pain moved beyond the physical to encompass the social, emotional and spiritual aspects of suffering. Her message was clear --- '*constant pain needs constant control*'. Dr. Saunder's philosophy of caring for the dying focused on total patient care, family care, bereavement care and the need for true interdisciplinary teamwork. Her pioneering work revolutionised the way in which the needs of dying patients and their families were met. In a relatively short period of time, she transformed the approach to caring for the dying and challenged many of the established negative attitudes.

In 1967, Dr. Saunders founded St Christopher's Hospice in South London. As the first 'modern' hospice it was unique in combining three key principles: excellent clinical care, education and research and it soon became an inspiration around the world. Elsewhere in the world, others were also working to improve the experience of the dying and their families. In 1965, Glaser and Strauss published their research into the experiences of dying patients in hospitals in the USA. In 1969, Dr. Elisabeth Kubler Ross outlined her ideas on the stages of dying and how to communicate with patients who were dying. Canadian physician Balfour Mount adapted Dr. Saunder's model for Canada developing a hospital-based approach and creating a specialised palliative care ward at the Royal Victoria Hospital, Canada in 1975.

Over time, the focus of 'terminal care' widened from caring for those who were actively dying to those who experienced problems with symptom control earlier in their disease progression. This shift in focus led to helping 'dying patients' live their remaining life to the full and prompted practitioners to question the term '*terminal care'* to describe their work. The new term '*palliative care'* was adopted to describe the approach of caring for dying patients and their families, this term is now used world-wide.

Over the last two decades palliative care development has been spurred on by many different international policies and agreements. An important step was taken in 2014 when the World Health

Assembly (WHA) passed its first palliative care resolution, representing a significant milestone in the global recognition of palliative care as a human right and a state obligation. The resolution emphasises that access to palliative care and pain relief is an element of the right to health, and calls on member states to integrate palliative care into their healthcare systems, improve funding, training and availability of pain relief. Despite such broad recognition of palliative care, worldwide only about 14% of people who need palliative care currently receive it. [(2)]

Palliative care started in Romania in 1992, when the Hospice Casa Sperantei (HCS) Foundation was set up as a non-governmental charity through a UK-Romanian partnership with the charity Hospices of Hope UK. The organisation's mission was to introduce and develop palliative care in Romania. A decade later, HCS established the first Romanian centre for palliative care services and education in Brasov. Since that time HCS has been actively involved in developing services and national and international education programmes in palliative care. It has also played a major part in the advancement and integration of palliative care into the Romanian healthcare system.

The National Association of Palliative Care (ANIP) was founded in 1997 by Dr Daniela Mosoiu and several important regulations specific to palliative care were advanced by ANIP, including a new law for pain control medication, new financing mechanisms for palliative care services through the national health insurance system and the establishment of minimum staffing ratios for palliative care in-patient units (2010). ANIP members have also been actively involved in several pilot projects aimed at improving palliative care services and education.

The current legal framework and the funding mechanisms have been gradually encouraging the emergence of new palliative care services, particularly inpatient units. Currently palliative care is offered by diverse providers paid under contracts with the District Houses of Insurance (DHIHs), (for health services) or by the Ministry of Labour, Family and Social Protection and Elderly (for social services). Home-based palliative care services are still isolated initiatives, and their funding through the health insurances system is low, even though 70% of people die at home in Romania and most of them wish to be looked after in their home environment at the end of their life. [(3)]

Populations in European and other developed countries are ageing, and more people are now living with the effects of serious chronic illnesses towards the end of their life. Traditionally, palliative care was offered mostly to cancer patients, but it is now being offered for a wider range of serious illnesses. Worldwide most adults in need of palliative care have chronic diseases such as cardiovascular diseases (38.5%), cancer (34%), chronic respiratory diseases (10.3%), AIDS (5.7%) and diabetes (4.6%). Many other conditions may also require palliative care, including kidney failure, chronic liver disease, neurological diseases, congenital anomalies and drug-resistant tuberculosis. An estimated 20 million patients worldwide need palliative care at the end of life; this number rises to 40 million if all those that could benefit from palliative care at an earlier stage of their illness are included. [(4)]

Section 2. – Country Context

- **Country Profile**

Romania is situated in the South-eastern part of central Europe. It has a surface area of 238,391km^2 and borders the Black Sea, Bulgaria, Ukraine, Hungary, Serbia, and Moldova. The history of an independent Romania began in 1878 after it broke away from the Ottoman Empire. Romania was under communist rule for over 40 years until the Romanian Revolution in 1989. Following a referendum in 1991 a new Constitution was adopted, this was revised in 2003 and defines Romania as a Republic. The President of the country is elected on the result of a general election held every five years. The Prime Minister is appointed by the President and legislative power is administered through a two-chamber Parliament, (the Chamber of Deputies and the Senate). Romania joined NATO in 2004 and the European Union (EU) in 2007. (5)

Romania is divided into 42 counties ('județe'), including Bucharest Municipality, 320 municipalities, 2,861 communes and 12,957 villages. (6) Each county is administered by a county council, responsible for local affairs and for the administration of national affairs at the county level.

In 1998, eight development regions were set up to better coordinate regional development (Figure 1). Their purpose is to serve as a structure for allocating EU funds for regional development, as well as for collecting regional statistics. These development regions are not administrative entities and do not have legal powers.

Figure 1 – The eight development regions

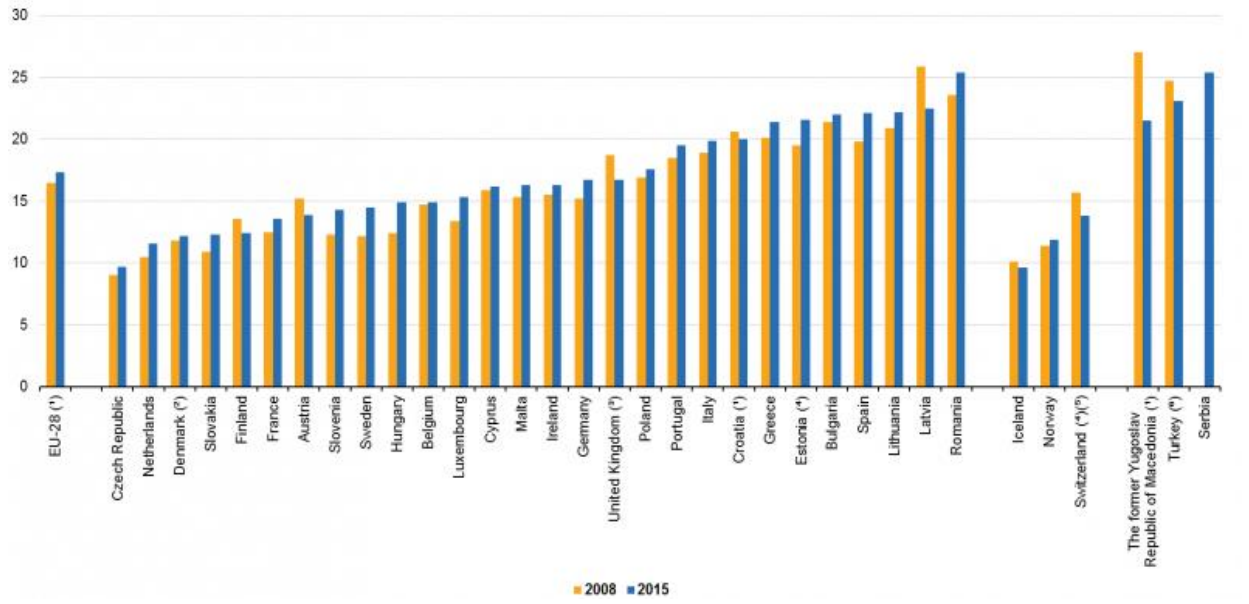
In terms of population Romania is the seventh largest country in the EU, with a population just under 20 million. The 2011 census showed the ethnic mix to be Romanian 83.4%, Hungarian 6.1%, Roma 3.1%, Ukrainian 0.3%, other 0.7% and unspecified 6.1%. (It should be noted that the Roma population is usually underestimated in official statistics and may represent 5 – 11% of the population.) (7)

The official language is Romanian. In the 2011 census 81.9% declared they are Eastern Orthodox, 6.4% protestant (various denominations, including Reformed and Pentecostal), 4.3% Roman Catholic, 0.9% Other (including Muslim), 0.2% atheist and 6.3% unspecified. (6)

Romania is classified as an upper-middle income country with a gross domestic product (GDP) per capita of US$10,000. Since the EU accession, economic growth has contributed significantly to poverty reduction. However, the poverty rate in Romania is still the second highest in the EU and the country has the fifth highest score for income inequality in the EU. Although the absolute poverty rate, fell from 44% in 2006 to 33% in 2008, almost a third of Romanians still live in poverty. The decline in absolute poverty over this period was observed in both rural areas (from 60% to 47%) and urban areas (from 24% to 17%). (7)

Figure 2 shows the percentage of Romanians at risk of poverty, after social transfers (which include state benefits), increased from 22.1% in 2008 to 25.3% in 2015. (8)

Figure 2 - People at risk of poverty after social transfers by country (2008 – 2015)



Source: People at risk of poverty and social exclusion, Eurostat Statistics Explained (2016,

The Human Development Index (HDI), which measures three indicators of human development, life expectancy, education and per capita income, shows Romania's score has increased from 0.69 in 1996 to 0.8 in 2015 ranking it 50 out of 188 countries worldwide. However, when compared against other European countries only, Romania ranks 34 out of 46 on the HDI.(9)

The latest survey on the quality of life of Romanians by the National Institute of Statistics 2012 revealed that 31.4% of households composed of persons without employment and that unemployment is higher in rural area than urban areas, (35% against 28.7%).(10) Poverty and social exclusion are greater for some ethnic groups in Romania that others, with approximately 75% of the Roma population living in poverty. It is estimated that only 51% of the Roma population are covered by social health insurance compared to 85% of the non-Roma population. A study by the World Bank in 2014, identified that Roma children living in Romania today, are three time more likely to be born into poverty than other Romanians, are more likely to grow up in overcrowded dwellings or slums, will probably not finish school or find a job and will have a lower life expectancy than other Romanians. (11)

- **Romanian Health Care System**

The Romanian health system is organised at two main levels, national and district. The system is highly centralised with the Ministry of Health being the central administrative authority responsible for stewardship of the system, regulatory framework and for setting strategy. Some functions, such as the accreditation of healthcare providers and setting and monitoring quality standards have been devolved to The National Authority for Quality Management in Healthcare, established in 2015. The National House of Insurance (NHIH) is an autonomous public institution that administers the social health insurance system. It allocates resources and sets the Framework Contract, together with the accompanying norms, defines the national benefits packages, as well as administering the provider payment mechanisms. [(12)]

At a district level the District Health Authorities, are responsible for ensuring service provision according the rules set at the central level, while the DHIH's are responsible for agreeing and monitoring contracts with local health care provider. Within the health system there are other organisations, including five main professional bodies, who are responsible for regulating their respective professions, monitoring healthcare professionals' practice and for training and accreditation. [(12)]

Romania spends less than 6% of GDP on health, compared with the EU average of 9.8%. [(13)] The national social health insurance system covers Romanian citizens for a 'comprehensive benefits package'. While social health insurance is in principle compulsory, in practice it covers only around 86% of the Romanian population. Those people who are not insured are only entitled to a 'minimum benefits package', which covers life-threatening emergencies, epidemic-prone infectious diseases and care during pregnancy. [(12)]

Provision of health care services in Romania remains characterised by over provision of highly specialised in-patient care and underutilisation of primary and community care. Although it is considered that there are sufficient family physicians to cover the population needs, they are underutilised and unevenly distributed between urban and rural areas, making access to primary care difficult for people living in rural areas. There is an overall disparity in the provision of healthcare services across Romania, both for primary and secondary care services, between Regions and between Counites and between urban and rural areas. [(13)]

Many hospital buildings are old and in need of repair, there is a lack of essential equipment and poor patient facilities. The lack of out-patient and ambulatory care facilities means that most healthcare care is still provided on an in-patient basis. There is a lack of provision for rehabilitation, long-term care and palliative care throughout the country, and this is s exacerbated in rural areas. Romania has one of the lowest medical staff per 1,000 inhabitants, 2.5 doctors and 5.8 nurses per 1,000 inhabitants, compared to the EU average of 3.4 doctors and 8.0 nurses per 1,000 inhabitants. The lack of healthcare staff is exacerbated by high external migration of doctors and nurses. [(12)]

- **Health Service Strategic Context**

The Romanian National Health Strategy 2014 - 2020 is the key policy document that sets out the vision and direction for health services in Romania. A fundamental principle, contained in the strategy, is for the health system to provide "*equal access to essential services and a cost-efficiency and evidence-based approach.*" (14)

In March 2014, the World Bank approved a EUR 250 million loan to Romania to improve the health system. The '*Health Sector Reform – Improving Health System Quality and Efficiency Project*' aims to '*improve access to, and the quality and efficiency of public health services in Romania*' (15)

The project includes the following components:

i) Rationalisation and strengthening of acute hospitals and developing key hospitals that will become the backbone of the hospital network.

ii) Strengthening ambulatory care, establishing specialised secondary ambulatory day care, diagnostic and treatment centres, enhancing primary health care services at the community level and developing capacity for long-term care and palliative care.

iii) Improving health sector governance and stewardship and improving the quality of medical care services.

iv) Providing support with project management, monitoring and evaluation

Included under '*strengthening ambulatory care*' is an objective to improve palliative care services in Romania.

In 2014 the Romanian ANIP (16) estimated that only 7.9% of the need for palliative care were covered by existing palliative care services. The National Health Strategy 2014 – 2020 sets an ambitious strategic target of reaching 60% coverage for patients requiring palliative care by 2020. (14)

The World Bank '*Health Sector Reform – Improving Health System Quality and Efficiency Project* has set a target of developing and providing an additional 29 palliative care departments within hospitals, 90 new palliative care outpatient departments and 90 new palliative care mobile teams across Romania to try and meet the 60% coverage target.

The following sections of this paper will look in detail at the need for palliative care services in Romania.

Section 3 – Demographic and Epidemiological Profiles

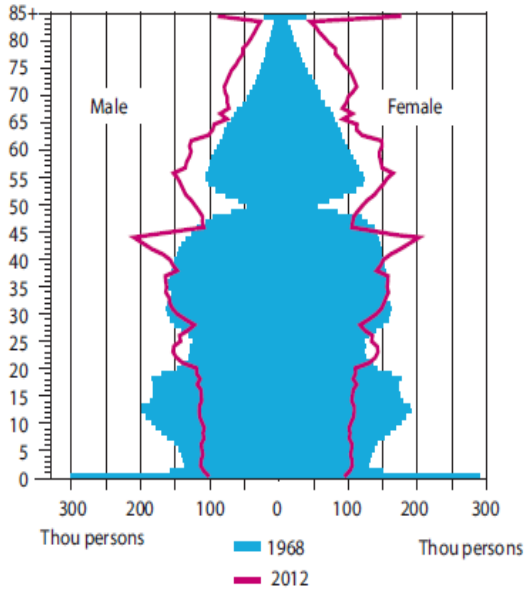
The method selected for assessing the need for palliative care is set out by Peter Tebbit and combines a demographical, epidemiological and benchmarking approach. [17] By using a combination of methods there is a greater chance of covering the elements that influence the need for palliative care services. This section of the report considers how the demographic and epidemiological profiles of Romina influence the need for palliative care.

3.1 Demographic Profile

In January 2017, the usually resident population of Romania was 19,638,000. There are slightly more females than males, with the female population being 51.1% and the male population 48.9%. [18]

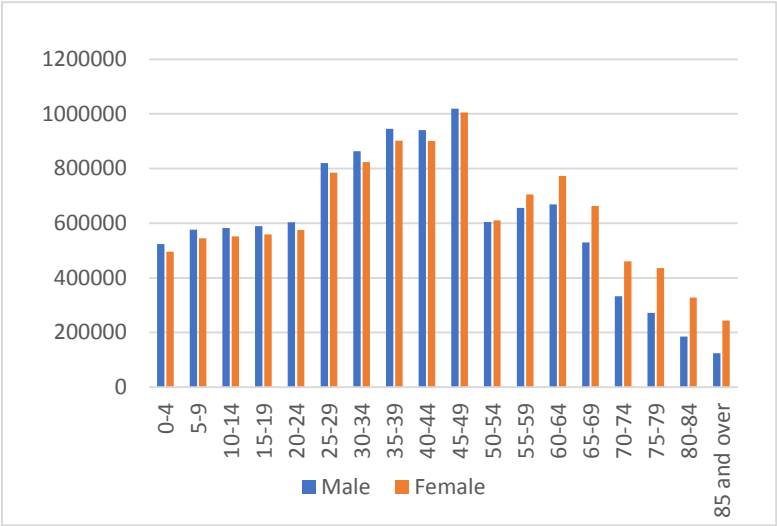
Over the last three decades Romania's population has decreased significantly due to the negative natural growth and international migration. Demographic ageing has become more pronounced with the gap between the elderly population, aged over 65 years and the younger population, aged between 0 – 14 years becoming greater. In 2016, the largest share of the total population belonged to the 45-49 age group (9.1%). The 0-4 age group was at 4.6%, the 5-9 age group and 10 – 14 age group were both (5.1%). The average age of the population was 41.2 years. [19]

Figure 3 – Changing Age Profile (1968 – 2012)



Source: D*emographics in Romania, National Institute of Statistics (2015)*

Figure 4 - Population by age group and gender (2017)



Source: Romania Institute of National Statistics, Press Release, October 2017

- **Population size by Region**

The population of Romania is distributed across eight development regions, each region has between 1.8 million and 3.4 million inhabitants. [(20)]

Table 1 - Population size per region

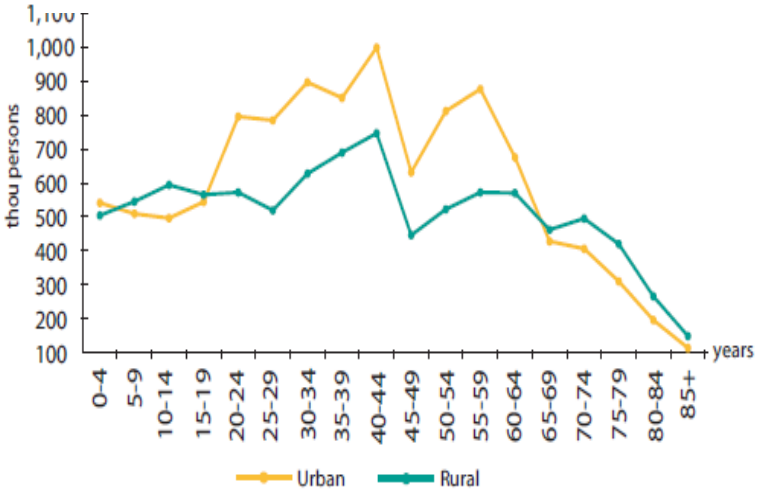
Development Region	Area (km^2)	Number of counties	Regional Population (July 2015)
North-West	34 159	6	2 581,768
Centre	34 082	6	2 346,562
North-East	36 850	6	3 263,564
South-East	35 762	6	2 481,684
South - Muntenia	34 489	7	3 047,055
Bucharest - Ilfov	1 811	1 + Bucharest	2 286,524
South-West Oltenia	29 212	5	2 005253
West	32 028	4	1 807,287
TOTAL	**238 393**	**41 + Bucharest**	**19,819,697**

Source: Romanian Institute of National Statistics (July 2017)

The greatest density of the population is concentrated in the urban areas. In 2017, the usually resident population in the urban areas amounted to 10.5 million, accounting for 53% of the population. Of the 302 municipalities and towns 85.6% had a population of under 50 thousand inhabitants, accounting for 18.1% of the country's population. The big cities, with more than 100,000 inhabitants, total 30.9% of the country's population.

In 2017, 9.1 million people lived in the rural area, accounting for 47% of the population. The communes with a population ranging between 1,000 and 5,000 accounted for 79.9% of the total communes. The highest density of Roma people is found in the counties of Mureș (8.8%), Călărași (8.1%), Sălaj (6.9%) and Bihor (6.1%). [(18)] This demographic profile is significant when planning health services as Roma people have higher birth and mortality rates and lower life expectancy than non-Roma Romanians, with more than half of Roma adults aged 45 years and over suffering from disabilities or chronic illnesses. [(11)] The age structure of the population also shows that the majority of people of working age, between 20 – 65 years, live in urban areas.

Figure 5 – Population by age by area (2012)

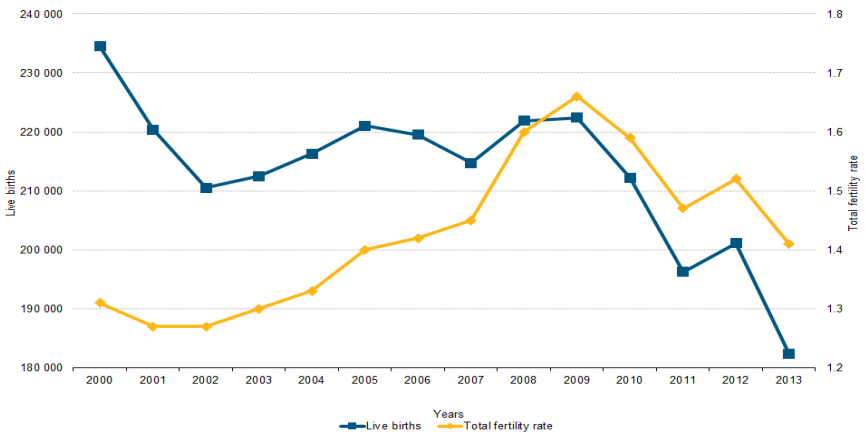


Source: Romania National Institute of Statistics, Demographics of Romania 2013

- **Birth Rate**

Crude birth rate indicates the number of live births occurring during the year, per 1,000 population. The birth rate in Romania has been gradually falling since 2007. In 2015, it was 9.3 births per 1,000 population. An upward trend in the fertility rate was seen at the beginning of the decade and it reached a maximum of 1.66 children per woman in 2009, after which the fertility rate has experienced a marked decline.

Figure 6 - Live births and total fertility rate (2000 – 2013)

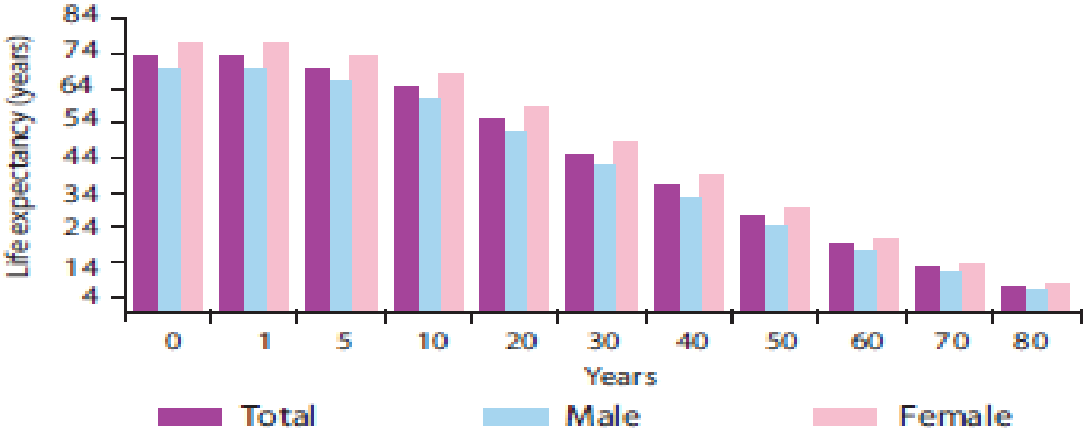


Source: United Nations Department of Economic and Social Affairs, Population Division (2015)

- **Life Expectancy**

Life expectancy in Romania has gradually been increasing in both male and females of all age groups over the last few decades, although Romania is still in the bottom five of all the EU 28 countries in terms of life expectancy. The average life expectancy in 2013 was 74.5 years. On average, Romanian women live longer than Romanian men, 79 years against 72 years. (21)

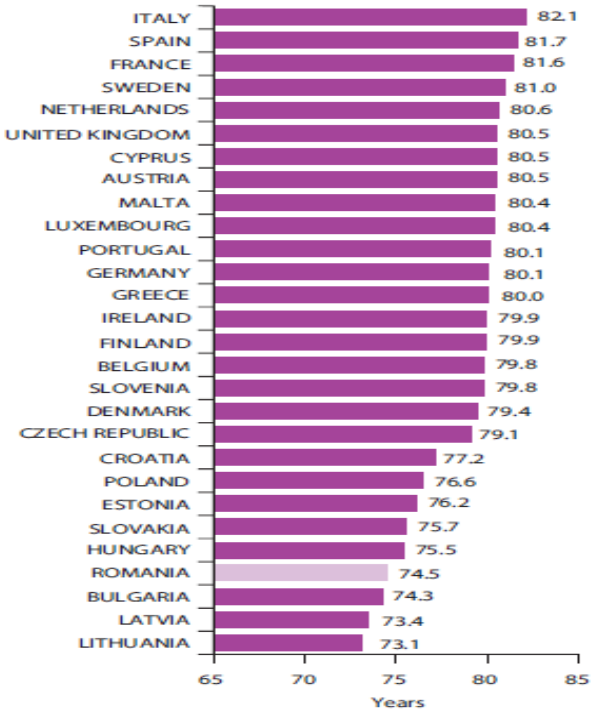
Figure 7 – Life expectancy at different ages (2013)



Source: Life Expectancy, Romania National Institute of Statistics (2013)

Although there has been an improvement in overall life expectancy this does not apply to all Romanians. The socio-economic conditions in which the Roma live, expose them to greater risk to their health in comparison with non-Roma people. Health problems that result from poor health and nutrition in childhood are exacerbated by a lack of access to healthcare and treatment later in life. In addition, 42% of Romanian Roma do not seek health care when they need it because they cannot afford the care, leading to increased health problems resulting in a life expectancy which is six years less than non-Roma people. [(22)]

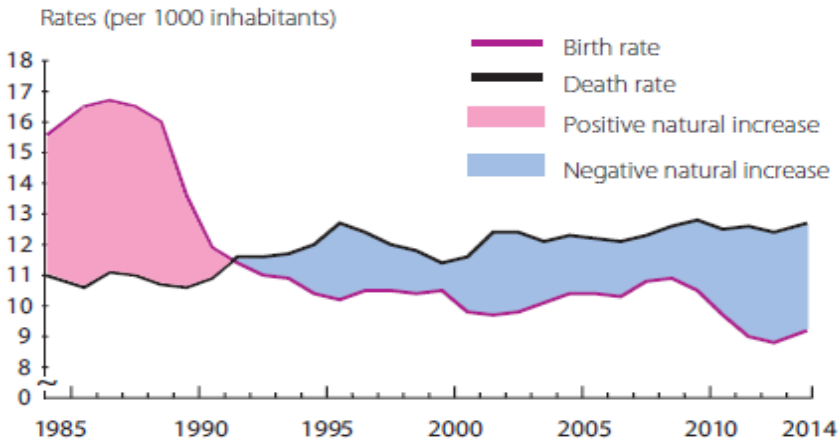
Figure 8 – Life expectancy in the EU 28 Countries (2011)



Source: Life Expectancy, Romania National Institute of Statistics (2013)

Figure 9 – Birth rate, death rate and natural increase

The natural population increase, the difference between births and deceased, excluding migration, reached a negative position in Romania 1990 and has been widening since.



Source: Romania in Figures, Institute of National Statistics (2015)

- **Emigration:** Between 2000 - 2015 Romania saw a rapid growth in the number of Romanians living abroad, which was estimated in 2015 at 3,400,000.[23] In 2015, emigration flows in Romania increased by 8% for the second year in a row to 187,500 persons, the majority of those leaving the country were aged between 20 – 50 years of age. The main reason for people leaving the country is economic migration. The emigration figures increase the negative natural increase in the population even further.

- **Marriage:** The marriage rate is a significant contributing factor to the birth rate. In 2014, the number of marriages was 118,100. Compared to 2011 the number of marriages decreased by 12.500. The average age at first marriage has been increasing for both sexes. In 2012, it was 29 years for males and 27 years for females. [6] With people getting married later in life, it has led to an increase in the age which women have children. Although the family unit still prevails in Romania, and consensual unions are not as widespread as in other EU countries, there is also a small increase in the percentage of children being born outside marriage (29% in 2006 to 30.1% in 2011).

- **Divorce:** In 2013, the number of divorces were 28 507 making the divorce rate of 1.4 divorces per 1 000 inhabitants. The number of divorces dropped compared to the 2000-2012 period, after an upward trend between 2004-2011.[6] Consensual unions and marriages between persons of the same sex are not legally recognised in Romania.

- **Abortion Rate**: The abortion rate in Romania has decreased by over half in the last decade, however, according to the WHO (2017), Romania still has one of the highest abortion rates in the EU.

- **Lifestyle Issues:** [8]

  - ***Smoking*** - A quarter of the resident population aged 15 years and over smoke tobacco (39.2% of the male population and 12.4% of the female population). Of the persons who smoke, 19.6% are daily smokers who smoke, on average, 13 cigarettes per day.

  - ***Obesity*** – 46.4% of the resident population aged 18 years and over are overweight (54.1% men and 39.2% women). 9.3% suffer from obesity (9.0% men and 9.7% women). People suffering from obesity are more frequent in urban areas 10.0% compared to 8.5% in rural areas.

  - ***Alcohol consumption*** - of the resident population aged 15 years and over men consume alcohol in a much higher proportion than women (72.6% compared to 42.8%). Most male alcohol consumers are in the 45-54 years age group (83.9%). Of the usual resident population aged 15 years and over, 18.7% consumed alcohol frequently (at least once a week).

3.2 Epidemiological Profile

In planning palliative care services, the most relevant data are the mortality data as it indicates where the most intense care is needed for patients with life-threatening diseases in their last years of life. Crude death rate, indicates the number of deaths occurring during the year, per 1,000 population.

- **Mortality Rates**

The death rate in Romania increased from 8.2 per 1,000 in 2003 to 13.2 in 2015. [24] The death rate for both males and females in Romania has risen over the last two decades. This indicator is affected by age distribution, so despite continued decline in mortality of all ages, most countries will eventually show a rise in the overall death rate due to declining birth and fertility rates and an increasing ageing population.

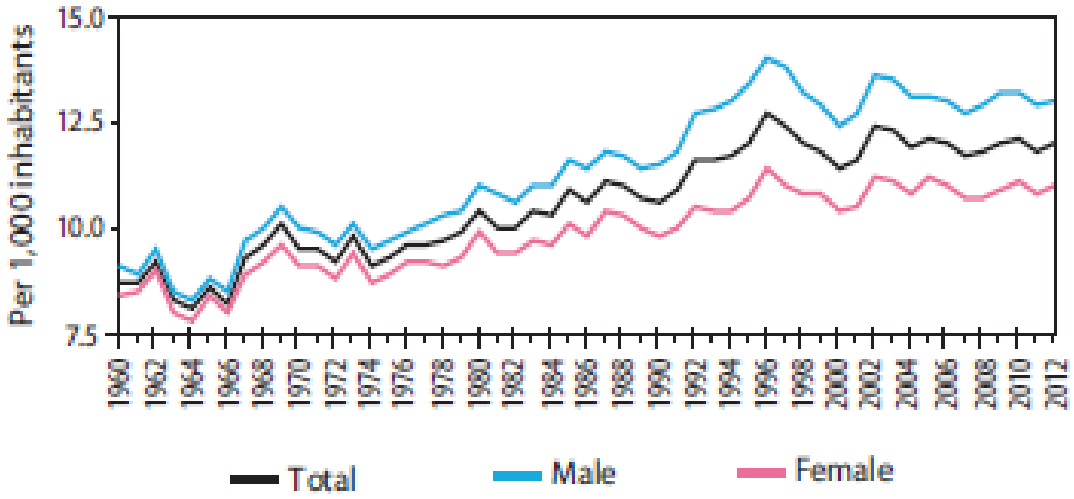


Figure 10 - Death Rate by gender (1960 – 2013)

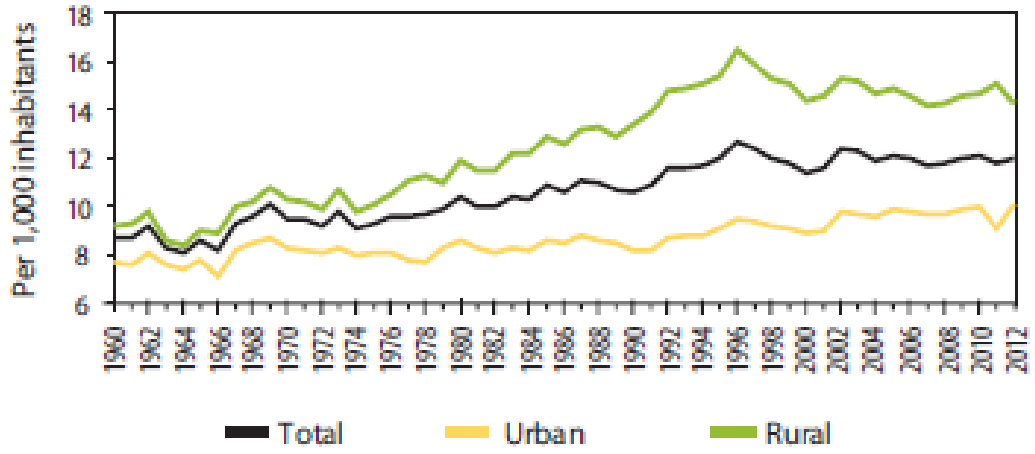
Source: Life Expectancy, Romania National Institute of Statistics (2013)

There is a difference in mortality rates between geographical areas (higher in the South). There is also a significant disparity in mortality rates of people living in urban and rural areas in Romania. In 2012, the urban mortality rate was 9.4% whereas the mortality rate for people living in the rural areas was 13.9%. [12]

The higher mortaltiy rate in rural areas is due to a number of factors including the social-econmic position of those living in rural area, the lack of health service provision, especially famliy doctors, and the large distances people have to travel to access health services. In a national survey lack of

transportation means was the third most common reason for declaring limited access to specialist health care services in rural areas, after lack of money and neglecting the health need. [12] [13]

Figure 11 – Mortality rate – Urban and Rural (1960 – 2012)



Source: Life Expectancy, Romania National Institute of Statistics (2013)

Life expectancy differs by location in Romania. Bucharest has the highest life expectancy in Romania, on average 77.8 years, 2.4 years above the national average. Other counties with a high life expectancy include Valcea (77.5 years), Cluj (76.7 years), Brasov (76.6 years), and Sibiu (76.2 years).

Satu Mare and Calarasi have the lowest life expectancy 73.2 years, 2.2 years below the national average and 5 years below Bucharest. Other counties with a low life expectancy include Giurgiu and Tulcea both at (73.5 years). [(12)]

In 2012, infant mortality was 9.6 deaths per 1,000 live births making Romania the highest infant mortality rate in the European Union. Infant deaths occur during the first months of life. The main causes of infant mortality are perinatal conditions (34%), followed by respiratory diseases (29%) and congenital pathologies (25%). The under-five mortality rate is also the highest in the EU27, 11.3 per 1,000 births. [(19)]

- **Main Causes of Death**

Over the last two decades the disease burden in Romania has shifted from a pattern dominated by maternal, child health and communicable diseases to one in which chronic, progressive diseases prevail. Although there has been a decline in infectious diseases over the last decade this may not continue if the downward trend in immunisation continues; vaccination rates against diphtheria, tetanus, pertussis and poliomyelitis fell from 99% in 2000 to 89% in 2013. [(12)]

In Romania, causes of death roughly follow the same pattern prevalent in the EU. The main causes of death in Romania in 2012 were circulatory disease (41%), followed by malignant tumours (15%), ischaemic heart diseases (14%), cerebrovascular diseases (13%) and digestive diseases (5%). Both women and men had the highest number of deaths from circulatory diseases. For women the second most common causes of death is cerebrovascular diseases, while for men the second most common cause of death is malignant neoplasms.

Table 2 - Main Causes of Death in Romania, (per 100,000 population), for selected years

	1980	1990	1995	2000	2005	2010	2012	2013	2014
Communicable diseases									
All infectious and parasitic diseases (A00–B99)	10.8	12.5	15.2	14.5	11.6	10.3	9.7	10.6[c]	12.0[c]
Tuberculosis (A15–A19)	4.1	7.4	11.8	9.5	7.9	6.3	5.1	5.1[c]	5.0[c]
Sexually transmitted infections (A50–A64)[a]	0.1	0.0	0.0	0.1	0.0	0.0	0.0	n/a	n/a
HIV/AIDS (B20–B24)[b]	n/a	n/a	n/a	n/a	n/a	n/a	0.8	0.8	n/a
Noncommunicable diseases									
Circulatory diseases (I00–I99)	768.9	705.7	747.7	667.6	645.4	539.7	507.8	659.3[c]	667.6[c]
Malignant neoplasms (C00–C97)	149.4	147.8	162.5	170.8	179.5	180.1	182.2	222.3[c]	226.6[c]
Colon cancer (C18)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	15.7[c]
Cancer of trachea, bronchus and lung (C32–C34)	25.8	29.4	34.3	35.6	37.2	37.8	38.3	44.6[c]	45.6[c]
Breast cancer (C50)	16.6	20.5	22.2	23.0	23.5	21.7	21.2	15.3[c]	14.8[c]
Cervical cancer (C53)	11.4	13.4	13.3	14.6	14.2	13.1	12.0	7.7[c]	7.5[c]
Diabetes (E10–E14)	5.7	9.6	7.9	7.4	8.0	8.6	7.9	9.9[c]	10.0[c]
Mental and behavioural disorders (F00–F99)	13.3	15.7	18.8	12.9	11.4	10.8	12.0	15.5[c]	17.1[c]
Ischaemic heart diseases (I20–I25)	152.3	202.2	248.4	230.5	217.8	187.1	173.5	136.4[c]	139.7[c]
Cerebrovascular diseases (I60–I69)	182.1	185.3	243.3	215.5	215.1	167.0	154.7	206.5[c]	200.1[c]
Chronic respiratory diseases (J00–J99)	71.7	27.2	13.3	27.2	24.5	20.5	19.6	56.7[c]	60.0[c]
Digestive diseases (K00–K93)	50.8	53.0	68.9	61.4	60.8	66.0	55.8	62.8[c]	65.2[c]
External causes									
Transport accidents (V01–V99)	n/a	27.8	21.1	15.8	15.4	12.3	10.9	n/a	9.8[c]
Suicide (X60–X84)	n/a	9.3	12.5	12.4	11.4	11.9	10.7	n/a	9.9[c]
Ill-defined and unknown causes of mortality (R95–R99)	0.7	0.4	4.6	1.4	3.0	8.6	8.3	n/a	n/a

Source: European Observatory on Health Systems & Policy, Health Systems in Transition, Romania, Vol. 18. No. 4. (original data source: WHO Regional Office for Europe 2016/NIPH database 2015 for years 2013/14)

In 2012, worldwide, the total number of deaths from cancer was over 8 million. [(25)] In the EU, in the same year, the mortality from cancer was 1,263,000 [(26)] and in Romania, the number deaths from cancer was 51,334 in 2015. [(27)] It is estimated that for Europe, including Romania, the situation will worsen over the next decade with the increase in the ageing population. This, together with an increase in people with chronic illnesses will make the need for palliative care services even greater.

The Regional Health Service Reports (2016) identify a disparity in health outcomes across the Regions in Romania. They state the counties of Dolj, Mehedinit and Olt have the highest mortality rates in the country, both in rural and urban areas. They also single out other counties where health outcomes are poor compared to the rest of the country, these include Constanta and Galati in the South-East, Calarasi, Giurgiu and Teleorman in the South and Salaj in the North-West.

3.3. Key findings from country, **demographic and epidemiological profiles and implications** for health service planning

i. **Population** - The population of Romania has been declining year on year. Declining birth and fertility rates, longer life expectancy and increased external migration has led to a change in the age profile of the country with less children and young people and increasing numbers of older people. This demographic trend is expected to continue and, over time, could have a negative effect on the Romanian labour market, the economy and funding for public services, including health care.

ii. **Age Profile and Lifestyle Factors:** A combination of people living longer and life style factors (smoking, obesity and alcohol consumption) will lead to a greater demand for health services in the future, especially for people with chronic, progressive diseases. The disease burden caused by an increase in the number of people living longer with chronic, progressive diseases and cancer will increase the need for both general health services and palliative care services.

iii. **Distribution of Population** - Over half the population live in urban areas, with the greatest density of people living in the big cities with more than 100,000 inhabitants. However, over 43% of the population still live in rural areas of communes between 500 – 1,000 people. Although the population volume is lower in rural areas, mortality rates are higher is some rural areas and health outcomes poorer. Health care services are less available in rural areas and people need to travel further, using inadequate transports systems, to access health services. Healthcare professionals are also less available in the rural areas, leading to some areas of the population not having access to a family doctor, as well as specialist healthcare services. The geographical spread of the population in Romania presents a challenge when planning all health care services, including palliative care.

iv. **Social-Economic Position** - The poverty rate in Romania is still the second highest in the EU and the country has the fifth highest score for income inequality in the EU. Approximately 40% of the population are at risk of poverty and social exclusion and this is especially prevalent in the Roma community. Poverty is a factor in both urban and rural areas. Poverty has a direct impact on health and creates a greater need for the provision of health services which are available and accessible to everyone regardless of their social or economic position.

v. **Social Structure** - People getting married later in life, starting families later and having less children is changing the social structure of families in Romania in line with other European countries. This, together with a steep increase in external migration means there are more elderly people living alone without the support of other family members. As the family unit becomes smaller, there will be less family members to care for relatives and the demands for long-term care and palliative care will increase.

vi. **Cause of Death**: The main causes of death in Romania are circulatory disease, followed by malignant tumours, ischaemic heart disease and cerebrovascular disease. Both men and women have the highest number of deaths from circulatory diseases. Malignant neoplasms are the second most common cause of death for men and there is an increase in both the prevalence and mortality rates caused by cancer for both men and women. These factors indicate that the need for palliative care for patient with cancer will continue to grow in Romania.

vii. **Workforce**: The decreasing number of working age people and the number of healthcare professionals (doctors and nurses) leaving the country will impact on the labour market and the availability of people to provide health care. This is a challenge for all specialities, including palliative care.

viii. **Health Care Services** – Although changes are being introduced across the healthcare system in Romania, much of healthcare is still provided in hospitals. Ambulatory care, primary care and community healthcare services are underdeveloped, as are national cancer screening prevention programmes. There is a large disparity in health service provision across the country and a lack of health care professionals, particularly in rural areas. To ensure everyone, including people living in remote rural areas, have equal access to healthcare services will require developing new models of care, investment, both financially and in training and education of staff, and developing primary, community and palliative care services across the country.

The following sections of this paper will specifically consider the need for palliative care services in Romania.

Section 4 – Assessment of Palliative Care Need

4.1 Methodology and Level of Palliative Care Need

There are several different methods for determining palliative care need. Stjearnsward [28] suggests that 66% of patients dying annually will require palliative care. Professor Irene Higginson [29] suggests an alternative way to determine palliative care need. She recommends that all patients dying with cancer will need palliative care and two thirds of the rest of deaths will also benefit from palliative care in the last year of life

To determine the number of patients requiring palliative care in Romania we used the **2015 population figures of 19,819,697** and the data on mortality and cause of death for the same year.

We identified that in 2015 there were a total of **261,697** deaths in Romania. 53% of the deaths were in the rural areas and 47% in urban areas.

From the total number of deaths, we identified that **191,609,** (73%) were from non-oncological causes, **51,334,** (20%) were from oncological causes and **18,754**, (17%) were from acute causes, such as accidents and suicide.

The acute deaths were excluded from our calculation for palliative care.

For the non-oncological group, we estimated that 66% would require palliative care and for the oncological group we estimated that 90% would require palliative care. Using this methodology, we identified the following:

- 66% of 191,609 (total non-oncological deaths - excluding acute deaths) = **126,462 requiring palliative care annually**

- 90% of 51,334 (total oncological deaths) = **46,201 requiring palliative care annually**

TOTAL NEED FOR PALLIATIVE CARE = 172,663 people annually

- **Counties with the greatest need for palliative care**

The counties with the greatest number of people needing palliative care (over 6,000 people annually) are in Prahova in the South, Dolj in South-West Region and the capital Bucharest. Other counties where the need is high, (over 5,000 people annually), are Constanta in South-East, Iasi, Suceava and Bacau in the North-East and Bihor and Cluj in the North-West.

- **Rural – Urban Split**

The total number of people needing palliative care are split between urban areas 81,121, and rural areas 91,541. This higher number in the rural area reflects the finding from the demographic study, which shows a higher mortality rate in some rural areas. It is also significant when planning palliative care services, when we will need to consider the appropriate models of care to meet the needs of people living in remote areas with very limited access to healthcare services and healthcare professionals.

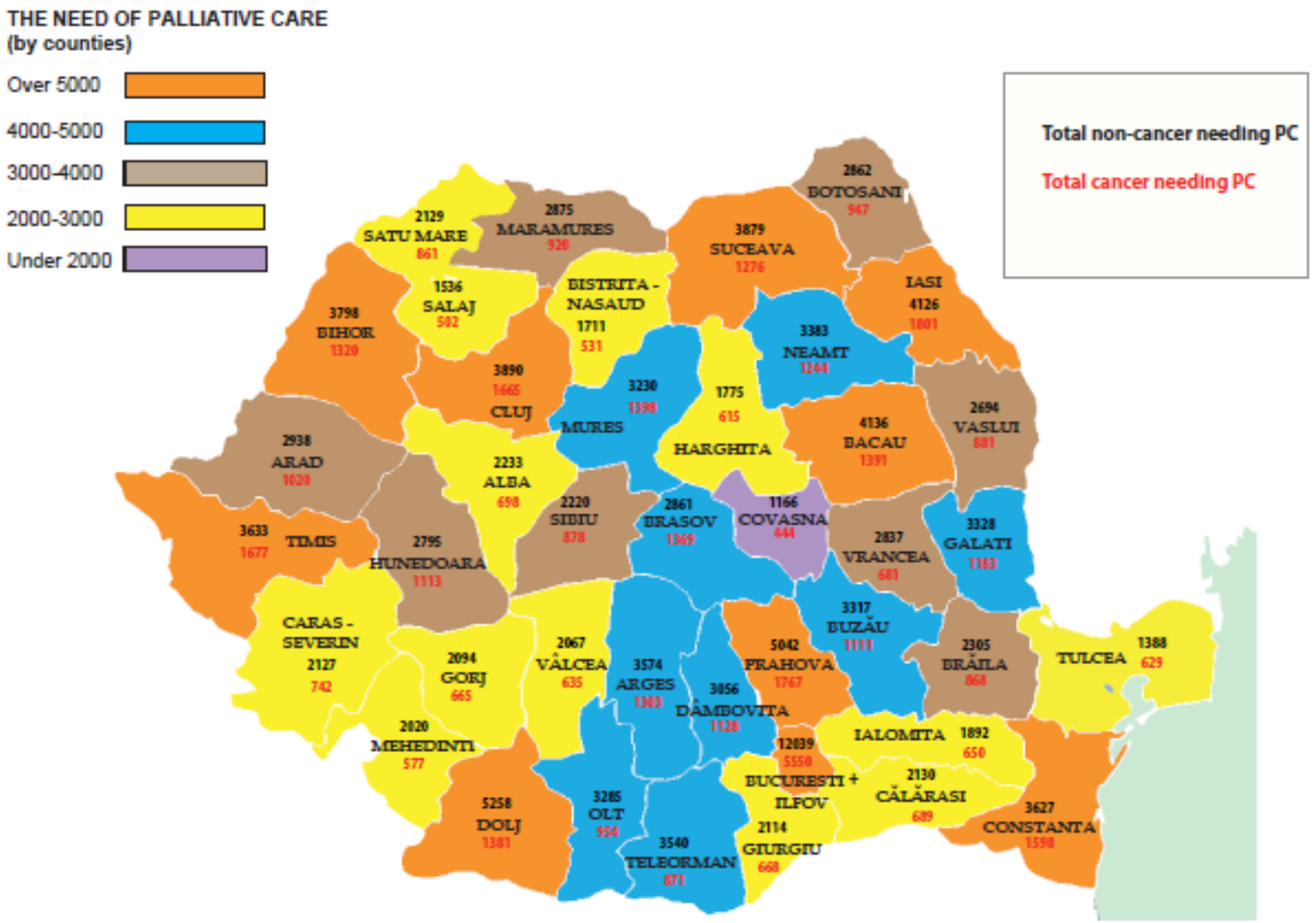
We have used the above methodology to calculate the need for palliative care services in each of the counties. This is set out in the following tables and summarised on the map on page 23.

	Mortality by residence					Mortality by cause of death			Need for PC				
Regions/ Counties	**TOTAL Deaths**	**Urban Deaths**	**% Urban**	**Rural Deaths**	**% Rural**	**Total non-cancer deaths**	**Total cancer deaths**	**Other deaths**	**Total non-cancer needing PC**	**Total cancer needing PC**	**Total need for PC**	**Urban Need for PC**	**Rural Need for PC**
TOTAL	**261,697**	**122952**	**46.98**	**138745**	**53.02**	**191,609**	**51,334**	**18,754**	**126,462**	**46,201**	**172,663**	**81,121**	**91,541**
NORD-VEST	**32524**	**14595**	**44.87**	**17929**	**55.13**	**24,150**	**6,444**	**1,930**	**15,939**	**5,800**	**21,739**	**9,755**	**11,984**
Bihor	7,542	3181	42.18	4361	57.82	5,754	1,467	321	3,798	1,320	**5,118**	2,159	2,959
Bistrita-Nasaud	3,415	915	26.79	2500	73.21	2,593	590	232	1,711	531	**2,242**	601	1,642
Cluj	8,216	4702	57.23	3514	42.77	5,894	1,850	472	3,890	1,665	**5,555**	3,179	2,376
Maramures	5,801	3051	52.59	2750	47.41	4,356	1,022	423	2,875	920	**3,795**	1,996	1,799
Satu Mare	4,458	1948	43.70	2510	56.30	3,226	957	275	2,129	861	**2,990**	1,307	1,684
Salaj	3,092	798	25.81	2294	74.19	2,327	558	207	1,536	502	**2,038**	526	1,512
CENTRU	**28,936**	**15482**	**53.50**	**13454**	**46.50**	**20,434**	**6,002**	**2,500**	**13,486**	**5,402**	**18,888**	**10,106**	**8,782**
Alba	4,621	2265	49.02	2356	50.98	3,384	776	463	2,233	698	**2,932**	1,437	1,495
Brasov	6,280	4443	70.75	1837	29.25	4,335	1,521	423	2,861	1,369	**4,230**	2,993	1,237
Covasna	2,450	1073	43.80	1377	56.20	1,767	493	190	1,166	444	**1,610**	705	905
Harghita	3,684	1410	38.27	2274	61.73	2,690	683	312	1,775	615	**2,390**	915	1,475
Mures	7,219	3257	45.12	3962	54.88	4,894	1,553	772	3,230	1,398	**4,628**	2,088	2,540
Sibiu	4,682	3034	64.80	1648	35.20	3,364	976	340	2,220	878	**3,099**	2,008	1,091

Regions/ Counties	TOTAL Deaths	Urban Deaths	% Urban	Rural Deaths	% Rural	Total non-cancer deaths	Total cancer deaths	Other deaths	Total non-cancer needing PC	Total cancer needing PC	Total need for PC	Urban Need for PC	Rural Need for PC
NORD-EST	**43,891**	**15454**	**35.21**	**28437**	**64.79**	**31,941**	**8,378**	**3,572**	**21,081**	**7,540**	**28,621**	**10,078**	**18,544**
Bacau	8,569	3260	38.04	5309	61.96	6,266	1,546	757	4,136	1,391	**5,527**	2,103	3,424
Botosani	5,860	1726	29.45	4134	70.55	4,337	1,052	471	2,862	947	**3,809**	1,122	2,687
Iasi	9,066	3575	39.43	5491	60.57	6,252	2,001	813	4,126	1,801	**5,927**	2,337	3,590
Neamt	6,965	2204	31.64	4761	68.36	5,126	1,382	458	3,383	1,244	**4,627**	1,464	3,163
Suceava	7,933	2982	37.59	4951	62.41	5,878	1,418	637	3,879	1,276	**5,156**	1,938	3,218
Vaslui	5,498	1707	31.05	3791	68.95	4,082	979	436	2,694	881	**3,575**	1,110	2,465
SUD-EST	**34,157**	**15841**	**46.38**	**18316**	**53.62**	**24,775**	**6,744**	**2,638**	**16,352**	**6,070**	**22,421**	**10,398**	**12,023**
Braila	4,841	2759	56.99	2082	43.01	3,492	964	385	2,305	868	**3,172**	1,808	1,364
Buzau	6,676	2008	30.08	4668	69.92	5,026	1,234	416	3,317	1,111	**4,428**	1,332	3,096
Constanta	7,879	5332	67.67	2547	32.33	5,496	1,776	607	3,627	1,598	**5,226**	3,536	1,689
Galati	6,870	3364	48.97	3506	51.03	5,042	1,314	514	3,328	1,183	**4,510**	2,209	2,302
Tulcea	3,042	1165	38.30	1877	61.70	2,103	699	240	1,388	629	**2,017**	772	1,245
Vrancea	4,849	1213	25.02	3636	74.98	3,616	757	476	2,387	681	**3,068**	767	2,300
BUCURESTI - ILFOV	26,029	23653	90.87	2376	9.13	18,241	6,167	1,621	12,039	5,550	**17,589**	15,984	1,606
Ilfov	3,784	1408	37.21	2376	62.79	2,718	806	260	1,794	725	**2,519**	937	1,582
Municipiul Bucuresti	22,245	22245	100.00		0.00	15,523	5,361	1,361	10,245	4,825	**15,070**	15,070	0
Regions/ Counties	**TOTAL Deaths**	**Urban Deaths**	**% Urban**	**Rural Deaths**	**% Rural**	**Total non-**	**Total cancer**	**Other deaths**	**Total non-cancer**	**Total cancer**	**Total need**	**Urban Need**	**Rural Need for**

						cancer deaths	deaths		needing PC	needing PC	for PC	for PC	PC
SOUTH	**43,260**	**13944**	**32.23**	**29316**	**67.77**	**32,345**	**7,862**	**3,053**	**21,348**	**7,076**	**28,424**	**9,162**	**19,262**
Arges	7,509	2637	35.12	4872	64.88	5,415	1,448	646	3,574	1,303	**4,877**	1,713	3,164
Calarasi	4,447	1301	29.26	3146	70.74	3,227	766	454	2,130	689	**2,819**	825	1,994
Dambovita	6,311	1519	24.07	4792	75.93	4,631	1,253	427	3,056	1,128	**4,184**	1,007	3,177
Giurgiu	4,167	951	22.82	3216	77.18	3,203	742	222	2,114	668	**2,782**	635	2,147
Ialomita	3,822	1297	33.94	2525	66.06	2,867	722	233	1,892	650	**2,542**	863	1,679
Prahova	10,371	4867	46.93	5504	53.07	7,639	1,963	769	5,042	1,767	**6,808**	3,195	3,613
Teleorman	6,633	1372	20.68	5261	79.32	5,363	968	302	3,540	871	**4,411**	912	3,498
SUD-VEST	**28,572**	**10061**	**35.21**	**18511**	**67.79**	**22,308**	**4,680**	**1,584**	**14,723**	**4,212**	**18,935**	**6,668**	**12,268**
Dolj	9,990	3937	39.41	6053	60.59	7,966	1,534	490	5,258	1,381	**6,638**	2,616	4,022
Gorj	4,200	1418	33.76	2782	66.24	3,172	739	289	2,094	665	**2,759**	931	1,827
Mehedinti	3,912	1390	35.53	2522	64.47	3,060	641	211	2,020	577	**2,597**	923	1,674
Olt	6,349	1668	26.27	4681	73.73	4,978	1,060	311	3,285	954	**4,239**	1,114	3,126
Valcea	4,121	1648	39.99	2473	60.01	3,132	706	283	2,067	635	**2,703**	1,081	1,622
VEST	**24,328**	**13922**	**57.23**	**10406**	**42.77**	**17,415**	**5,057**	**1,856**	**11,494**	**4,551**	**16,045**	**9,182**	**6,863**
Arad	6,108	3161	51.75	2947	48.25	4,452	1,133	523	2,938	1,020	**3,958**	2,048	1,910
Caras-Severin	4,323	2096	48.48	2227	51.52	3,223	824	276	2,127	742	**2,869**	1,391	1,478
Hunedoara	5,862	4083	69.65	1779	30.35	4,235	1,237	390	2,795	1,113	**3,908**	2,722	1,186
Timis	8,035	4582	57.03	3453	42.97	5,505	1,863	667	3,633	1,677	**5,310**	3,028	2,282

This map summarises the palliative care need for cancer and non-cancer patients per district and indicates the districts with the greatest need.



4.2 Current Palliative Care Services

The following tables set out the existing palliative care services. The information has been obtained from a survey of palliative care providers undertaken in 2015 and the Directory of Palliative Care (2016). [30] The tables show the number of services by different providers, (public, NGOs and private companies) and the distribution of services by location.

Tables 3 - Existing Palliative Care Beds and Services by Type of Provider per District - 2016

Region/ County	Pubic PC Beds	NGO PC Beds	Private PC Beds	Total no. PC beds (2016)	Total PC In-patient Units	PUBLIC	NGO	PRIVATE	Total Home-based PC Teams	NGO	Total PC Day Centres	NGO	Total PC Outpatient Clinics	NGO	Total Mobile PC Hospital teams	NGO
N. EAST																
Bacău	40	0	29	69	**6**	6			2	2						
Botoşani	0	0	0	0	**0**											
Iaşi	327	30	213	570	**10**	5	1	4								
Neamţ	26	0	40	66	**3**	2		1								
Suceava	22	0	88	110	**4**	2		2								
Vaslui	0	0	0	0	**0**											
Total NE	**415**	**30**	**370**	**815**	**23**	**15**	**1**	**7**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**
N. WEST																
Bihor	26	0	0	26	**3**	3			1	1						
Bistriţa-Năsăud	5	0	0	5	**1**	1										
Cluj	18	30	55	103	**4**	2	1	1	1	1						
Maramureş	20	0	40	60	**3**	2		1								
Sălaj	10	0	20	30	**2**	1		1								
Satu Mare	12	0	0	12	**1**	1										
Total NW	**91**	**30**	**115**	**236**	**14**	**10**	**1**	**3**	**2**	**2**	0	0	0	0	0	**0**
S. WEST																
Dolj	0	22	0	22	**1**		1				1	1				
Gorj	0	0	0	0												
Mehedinţi	0	0	0	0												
Olt	0	0	0	0												
Vâlcea	0	0	0	0												
Total NE	**0**	**22**	**0**	**22**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**0**	0	0	0
SOUTH																
Argeş	25	0	0	25	**1**	1					1	1				
Călăraşi	0	0	0	0												
Dâmboviţa	0	0	0	0												
Giurgiu	0	0	24	24	**1**			1	1	1						
Ialomiţa	0	0	0	0												
Prahova	10	0	29	39	**3**	1		2								
Teleorman	0	0	0	0												
Total South	**35**	**0**	**53**	**88**	**5**	**2**	**0**	**3**	**1**	**1**	**1**	**1**	**0**	**0**	**0**	**0**

Existing Palliative Care Beds and Services by Type of Provider per District – 2016 (Continued)

Region/ County	Pubic PC Beds	NGO PC Beds	Private PC Beds	Total no. of PC beds 2016	Total PC In-patient units	PUBLIC	NGO	PRIVATE	Total Home-based PC Teams	NGO	Total PC Day Centres	NGO	Total PC Outpatient Clinics	NGO	Total Mobile PC Hospital teams	NGO
S. EAST																
Brăila	0	0	34	**34**	**1**			1								
Buzău	30	0	42	**72**	**4**	2		2								
Constanţa	0	15	0	**15**	**1**		1									
Galaţi	10	0	0	**10**	**1**	1										
Tulcea	0	0	0	**0**												
Vancea	0	0	0	**0**												
Total SE	**40**	**15**	**76**	**131**	**7**	**3**	**1**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
CENTRE																
Alba	6	0	0	**6**	**1**	1			1	1						
Braşov	20	19	30	**69**	**3**	1	2		3	3	2	2	2	2	2	2
Covasna	0	0	0	**0**					1	1						
Harghita	0	0	10	**10**					1	1						
Mureş	22	0	10	**32**	**4**	3		1	1	1						
Sibiu	16	29	0	**45**	**4**	**2**	**2**									
Total Centre	**64**	**48**	**50**	**162**	**12**	**7**	**4**	**1**	**7**	**7**	**2**	**2**	**2**	**2**	**2**	**2**
WEST																
Arad	30	0	78	**108**	**5**	4		1								
Caraş-Severin	0	0	0	**0**												
Hunedoara	52	0	0	**52**	**4**	4										
Timiş	20	30	0	**50**	**4**	2	2									
Total West	**102**	**30**	**78**	**210**	**13**	**10**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
BUCHAREST-ILFOV																
Mun. Bucureşti	19	59	0	**78**	**7**	4	3	0	1	1	1	1	1	1	1	1
Ilfov	37	0	0	**37**	**1**		1	0								
Total Buc-Ilf.	**56**	**59**	**0**	**115**	**8**	**4**	**4**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
GRAND TOTAL	**803***	**234***	**742**	**1779**	**83**	**51**	**14**	**18**	**13**	**13**	**5**	**5**	**3**	**3**	**3**	**3**

Total Current Public and NGO Beds (not-for-profit) = *1,037

- **Summary of Existing Palliative Care Services**

The 2016 Palliative Care Services Register [30] and data from the Survey of Palliative Care Providers (2015) [31] identifies the following palliative care services are available across the eight Regions**:**

In-Patient Palliative Care Beds and Admissions:

Palliative care in-patient beds are provided in a range of different settings including public and private hospitals and NGO hospices. There is a total of 83 providers of palliative care across the country, approximately 61% are public providers, 21% private (fee-paying) providers and 17% NGOs (not-for-profit) providers.

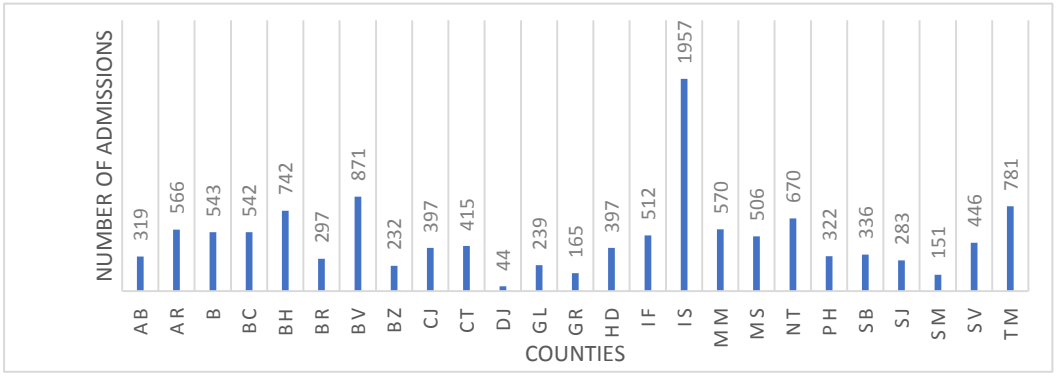
There is a total of **1,779** palliative care beds in the country. **1,037 (59%)** are not-for-profit beds provided by public funding or NGO's providers. The highest number of palliative care beds (45%) are in the North-East Region, (815 beds). However, it should be noted that almost half of these beds (370) are private, fee-paying beds and therefore not accessible to the whole population.

There are **17 counites** across the whole country that do not have any public or not-for-profit beds. The Southern part of the country is the worst served in terms of palliative care beds. The South-West Region has only 1% of the country's palliative care beds, (22 beds in Dolj), and four counties without any palliative care beds. The South Region has only 5% of the country's palliative care beds, (88 beds in Arges, Giurgiu and Prahova), and four counties without any palliative care beds.

There is disparity in the distribution of palliative care beds between Regions and between counites within the same Region. For example, Iasi has the largest concentration of palliative care beds, 69% (570 beds) in the North-East Region, while two counties in the same region, Botosani and Vaslui do not having any palliative care beds. However, it is possible that beds in Iasi also serve the counties of Botosani and Vasluis. Brasov has 42% of the palliative care beds in the Centre Region and Covasna does not have any beds. This pattern of uneven distribution of palliative care beds is found across country.

The 2015 survey of palliative care providers shows that Isai and Brasov have the highest number of palliative care admissions per district. This is not surprising as both these counties have the highest number of beds in the country

Figure 12 - Number of palliative care admissions per county



Source: 2015 Survey of Palliative Care Providers

Home-Based Palliative Care Teams:

There is a very small number of home-based palliative care teams serving the population of Romania, in **total 13 teams** provide palliative care to patients at home. The Centre Region has the largest number of teams with 7 home-based palliative care teams, one in each of the districts, and 3 in Brasov. The North-East Region has 2 home-based teams in Bacu, the North-West Region has 2 home-based teams, 1 in Bihor and 1 in Cluj. The South has 1 home-based team in Giurgiu and Bucharest has 1 home-based palliative care team.

The West, South West and South-East Regions do not have any home-based palliative care teams. All home-based palliative care teams are provided through NGOs.

Palliative Care Outpatient Departments:

Romania is very poorly served with palliative care outpatient departments, there is only a **total of 3** palliative care outpatient departments in the whole of in Romania, 2 in Brasov and 1 in Bucharest. These outpatient services are provided through an NGO.

Palliative Care Day Centres:

There is **a total of 5** palliative care day centres, 1 in Arges, 1 in Dolj, 2 in Brasov and 1 in Bucharest. All the palliative care day centres are provided through NGOs.

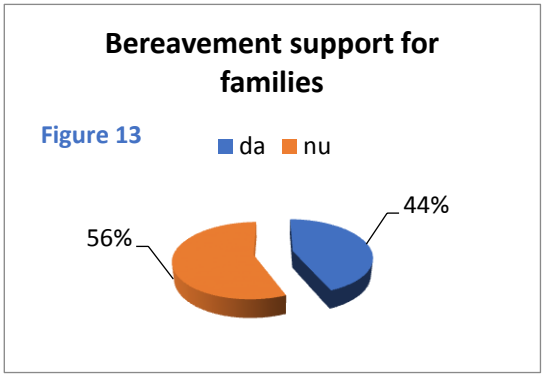


Figure 13

Bereavement Support: Providing bereavement support to families following the death of family member is recognised internationally as being an essential part of good quality palliative care. The data from the 2015 survey [31] shows that only 56% of palliative care providers in Romania offer a bereavement service to families, this may be due to bereavement support not being included in funding for palliative care services.

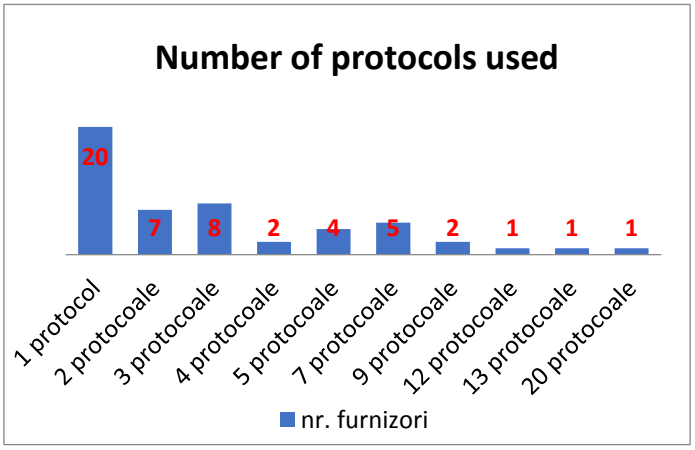


Figure 14

Clinical Protocols – Over the last decade, internationally, clinical protocols have become an increasingly familiar part of clinical practice. Clinical protocols are evidence-based guidelines for specific conditions or symptoms. Woolf et al [32] state that the use of clinical protocols aims to '*improve the quality of clinical decisions and the consistency of patient care between physicians and across healthcare settings*'. Protocols are also useful in helping to manage costs by ensuring interventions are based on research based practice. The 2015 survey of palliative care providers showed that over 80% of providers were using protocols in their work, however the graph demonstrates that only 1

provider was using 20 protocols, with approximately 68% of providers using only three or less protocols.

4.3 Agreed Ratios for Palliative Care Services and Staffing

The service ratios for determining the number of palliative care beds, palliative care out-patient departments and home based palliative care teams has been set out in the Romanian Ministry of Health Regional Service Plans (2016) [13]

The staffing ratio per palliative care out-patient clinic and per palliative care home-based team has also been agreed in the regulations.

The staffing ratio for palliative care beds has previously been agreed with the Ministry of Health and House of Insurance and is used to set the staffing levels for palliative care beds across the country.

Table 3 - Palliative Care Service and Staffing Ratios

Number of Palliative Care In-patient Beds per population	Number of Palliative Care Out-patient Clinics per population	Number of Palliative Care Home-based Teams per Population
25 PC beds per 125,000 population	**1 PC out-patient clinic per 60,000 population**	**1 PC home-based team per 40,000 population**
Staffing ratio for palliative care inpatient beds	**Staffing ratio for palliative care outpatient clinic**	**Staffing ratio for home-based team**
• 1 doctor with PC subspecialty per 12 beds • 1 nurse with PC specialty per 8 beds per shift • 1 nurse-assistant per 8 beds per shift • 1 social worker per 25 beds • 0.5 psychologist per 12 beds ; • 4 - part-time - other staff (physiotherapist, spiritual counsellor)	1 palliative care outpatient team consists of: • 1 doctor • 1 nurse • 0.5 social worker • 2 part-time other staff (physiotherapist, spiritual counsellor)	1 palliative care home-based team consists of: • 2 doctors • 4 nurses • 1 psychologist • 0.5 physiotherapist

Using these ratios, and based on the population figures for 2015, we have been able to estimate the number of services and staff required to meet the palliative care needs of the population.

The palliative care **services** that are required and the gap between what is currently available and what is needed, is set out in the following tables by Region and County.

Note: When estimating the number of additional beds needed private (for-profit) beds were excluded from the calculation, as these are not accessible to everyone within the population.

The **staffing** requirements needed to provide these services will be addressed later in the paper.

4.4 Palliative Care Services - Gap analysis

The following pages set out the gap between the palliative care services that are **currently** available and the palliative care services that are **required** to meet the needs of the population. The breakdown is shown in the following eight tables which identifies the current and required palliative care services and the disparity between the two, by service per county.

North East Region - Palliative Care Services – Current, Required and Gap Analysis

North East	Population (2015)	Current beds by number and type of (service provider)			Beds required	Gap (excludes private beds)	Current out-patients by number and type of service providers			OP Required	Gap (excludes private facilities)	Current home care teams by number and type of service providers			Home care teams required	Gap (excludes private facilities)
P = Public NGO = Charity C = Private Company		P	NGO	C	25 beds per 125,000 Population		P	NGO	C	1 clinic per 60,000 Population		P	NGO	C	1 home care team Per 40,000 population	
Bacau	602,399	40	0	29	120	80	0	0	0	10	10	0	2	0	15	13
Botosani	397,151	0	0	0	80	80	0	0	0	7	7	0	0	0	10	10
Iasi	787,671	327	30	213	157	-200	0	0	0	13	13	0	0	0	20	20
Neamt	457,606	26	0	40	92	66	0	0	0	8	8	0	0	0	11	11
Suceava	630,365	22	0	88	126	104	0	0	0	10	10	0	0	0	16	16
Vaslui	388,372	0	0	0	78	78	0	0	0	6	6	0	0	0	10	10
Total	3,263,564	**415**	**30**	**370**	**653**	208	0	0	0	54	54	0	2	0	**82**	80

Source for population: Romanian Institute of National Statistics 2017 (Population figures for July 2015)

North West Region - Palliative Care Services – Current, Required and Gap Analysis

North West	Total Population (2015)	Current beds by number and type of (service provider)			Beds required	Gap (excludes private beds)	Current out-patients by number and type of service providers			OP Required	Gap (excludes private facilities)	Current home care teams by number and type of service providers			Home care teams required	Gap (excludes private facilities)
P = Public NGO = Charity C = Private Company		P	NGO	C	25 beds per 125,000 Population		P	NGO	C	1 clinic per 60,000 Population		P	NGO	C	1 home care team Per 40,000 population	
Bihor	570539	26	0	0	114	88	0	0	0	9	9	0	0	0	14	14
Bistriţa-Năsăud	282964	5	0	0	56	51	0	0	0	5	5	0	0	0	7	7
Cluj	701109	18	30	55	140	92	0	0	0	11	11	0	0	0	18	18
Maramureş	469657	20	0	40	94	74	0	0	0	8	8	0	0	0	12	12
Satu Mare	339201	12	0	0	68	56	0	0	0	6	6	0	0	0	8	8
Sălaj	218298	10	0	20	44	34	0	0	0	4	4	0	0	0	5	5
Total NW	2,581,768	91	30	115	516	395	0	0	0	43	43	0	0	0	64	64

Source for population: Romanian Institute of National Statistics 2017 (Population figures for July 2015)

South West Region - Palliative Care Services – Current, Required and Gap Analysis

South West	Total Population (2015)	Current beds by number and type of			Beds required	Gap (excludes private beds)	Current out-patients by			OP Required	Gap (excludes private facilities)	Current home care teams by			Home care teams required	Gap (excludes private facilities)
P = Public NGO = Charity C = Private Company		P	NGO	C	25 beds per 125,000 Population		P	NGO	C	1 clinic per 60,000 Population		P	NGO	C	1 home care team Per 40,000 population	
Dolj	643,884	0	22	0	129	107	0	0	0	11	11	0	0	0	16	16
Gorj	329,593	0	0	0	66	66	0	0	0	5	5	0	0	0	8	8
Mehedinţi	254,528	0	0	0	51	51	0	0	0	4	4	0	0	0	6	6
Olt	415,572	0	0	0	83	83	0	0	0	7	7	0	0	0	11	11
Vâlcea	361,676	0	0	0	72	72	0	0	0	6	6	0	0	0	9	9
Total NW	**2,005,253**	**0**	**22**	**0**	**401**	**379**	0	0	0	**33**	**33**	0	0	0	**50**	**50**

Source for population: Romanian Institute of National Statistics 2017 (Population figures for July 2015)

South Region - Palliative Care Services – Current, Required and Gap Analysis

South	Total Population (2015)	Current beds by number and type of (service provider)			Beds required	Gap (excludes private beds)	Current out-patients by number and type of service providers			OP Required	Gap (excludes private facilities)	Current home care teams by number and type of service providers			Home care teams required	Gap (excludes private facilities)
P = Public NGO = Charity C = Private Company		P	NGO	C	25 beds per 125,000 Population		P	NGO	C	1 clinic per 60,000 Population		P	NGO	C	1 home care team Per 40,000 population	
SOUTH																
Argeş	598130	25	0	0	120	95	0	0	0	10	10	0	0	0	15	15
Călăraşi	297199	0	0	0	59	59	0	0	0	5	5	0	0	0	7	7
Dâmboviţa	507475	0	0	0	101	101	0	0	0	8	8	0	0	0	13	13
Giurgiu	275713	0	0	0	55	55	0	0	0	5	5	0	0	0	7	7
Ialomiţa	265947	0	0	24	53	53	0	0	0	4	4	0	0	0	7	7
Prahova	744119	10	0	29	149	139	0	0	0	12	12	0	0	0	18	18
Teleorman	358472	0	0	0	72	72	0	0	0	6	6	0	0	0	9	9
Total	3,047,055	35	0	53	609	574	0	0	0	50	50	0	0	0	76	76

Source for population: Romanian Institute of National Statistics 2017 (Population figures for July 2015)

South East Region - Palliative Care Services – Current, Required and Gap Analysis

South East	Total Population (2015)	Current beds by number and type of (service provider)			Beds required	Gap (excludes private beds)	Current out-patients by number and type of service providers			OP Required	Gap (excludes private facilities)	Current home care teams by number and type of service providers			Home care teams required	Gap (excludes private facilities)
P = Public NGO = Charity C = Private Company		P	NGO	C	25 beds per 125,000 Population		P	NGO	C	1 clinic per 60,000 Population		P	NGO	C	1 home care team Per 40,000 population	
Brăila	305989	0	0	34	61	61	0	0	0	5	5	0	0	0	8	8
Buzău	433838	30	0	42	87	57	0	0	0	7	7	0	0	0	11	11
Constanţa	682375	0	15	0	136	121	0	0	0	11	11	0	0	0	17	17
Galaţi	522258	10	0	0	104	94	0	0	0	9	9	0	0	0	13	13
Tulcea	204688	0	0	0	41	41	0	0	0	4	4	0	0	0	5	5
Vrancea	332536	**0**	**0**	**0**	**67**	**67**	0	0	0	**5**	**5**	0	0	0	8	**8**
Total	**2481684**	**40**	**15**	**76**	**496**	**441**	0	0	0	**41**	**41**	0	0	0	**62**	**62**

Source for population: Romanian Institute of National Statistics 2017 (Population figures for July 2015)

Centre Region - Palliative Care Services – Current, Required and Gap Analysis

Centre	Total Population (2015)	Current beds			Beds required	Gap (excludes private beds)	Current out-patients by number and type of service providers			OP Required	Gap (excludes private facilities)	Current home care teams by number and type of service providers			Home care teams required	Gap (excludes private facilities)
P = Public NGO = Charity C = Private Company		P	NGO	C	25 beds per 125,000 Population		P	NGO	C	1 clinic per 60,000 Population		P	NGO	C	1 home care team Per 40,000 population	
Alba	334769	6	0	0	67	61	0	0	0	6	6	0	0	0	8	8
Braşov	550981	20	19	30	110	71	0	2	0	9	7	0	2	0	14	12
Covasna	207055	0	0	0	41	41	0	0	0	3	3	0	0	0	5	5
Harghita	308453	0	0	10	62	62	0	0	0	5	5	0	0	0	8	8
Mureş	545168	22	0	10	109	87	0	0	0	9	9	0	0	0	14	14
Sibiu	400136	**16**	**29**	**0**	**80**	**35**	0	0	0	7	7	0	0	0	10	10
Total	**2,346,562**	**64**	**48**	**50**	**469**	**357**	0	2	0	**39**	**37**	0	2	0	**59**	**57**

Source for population: Romanian Institute of National Statistics 2017 (Population figures for July 2015)

West Region - Palliative Care Services – Current, Required and Gap Analysis

West	Total Population (2015)	Current beds by			Beds required	Gap (excludes private beds)	Current out-patients by number and type of service providers			OP Required	Gap (excludes private facilities)	Current home care teams by number and type of service providers			Home care teams required	Gap (excludes private facilities)
P = Public NGO = Charity C = Private Company		P	NGO	C	25 beds per 125,000 Population		P	NGO	C	1 clinic per 60,000 Population		P	NGO	C	1 home care team Per 40,000 population	
Arad	425348	30	0	78	85	55	0	0	0	7	7	0	0	0	11	11
Caraş-Severin	284400	0	0	0	57	57	0	0	0	5	5	0	0	0	7	7
Hunedoara	401336	52	0	0	80	28	0	0	0	7	7	0	0	0	10	10
Timiş	696203	20	30	0	139	89	0	0	0	11	11	0	0	0	17	17
Total	**1807287**	**102**	**30**	**78**	**361**	**229**	0	0	0	**30**	**30**	0	0	0	**45**	**45**

Source for population: Romanian Institute of National Statistics 2017 (Population figures for July 2015)

Bucharest-Ilfov - Palliative Care Services – Current, Required and Gap Analysis

Bucharest Ilfov	Total Population (2015)	Current beds by number and type of (service provider)			Beds required	Gap (excludes private beds)	Current out-patients by number and type of service providers			OP Required	Gap (excludes private facilities)	Current home care teams by number and type of service providers			Home care teams required	Gap (excludes private facilities)
P = Public NGO = Charity C = Private Company		P	NGO	C	25 beds per 125,000 Population		P	NGO	C	1 clinic per 60,000 Population		P	NGO	C	1 home care team Per 40,000 population	
Mun. Bucureşti	1,848,912	19	59	0	370	292	0	1	0	31	30	0	1	0	46	45
Ilfov	437612	37	0	0	87	50	0	0	0	7	7	0	0	0	11	11
Total	**2,286,524**	**56**	**59**	**0**	**457**	**342**	0	1	0	38	**37**	0	1	0	**57**	**56**

Source for population: Romanian Institute of National Statistics 2017 (Population figures for July 2015)

SUMMARY OF GAP ANALYSIS FOR PALLIATIVE CARE SERVICES

Based on the 2015 population, the ratios set for palliative beds, outpatient departments and home-based teams and our understanding of the current number of palliative care services available, this gap analysis identifies there is a need for the following **ADDITIONAL** services:

- **2,925 additional Palliative Care In-Patient Beds Required**
- **325 additional Palliative Care Outpatient Departments**
- **490 additional Palliative Care Home-Based Teams**

4.5 Current number of Palliative Care Healthcare Professionals

The following table shows the **current** number of palliative care professionals in the different counites. Specialist doctors are shown in two columns. The first column shows the **total** number of specialist palliative care doctors. The second column shows the number of specialist palliative care doctors who reported they are **currently** working in palliative care

Region	Specialist PC Doctors (total)	Specialist PC Doctors (currently working in PC)	PC Nurses	Social workers	Family doctors with basic PC training
Total BUC-IFOV	**85**	**13**	**45**	**3**	**85**
ILFOV	4	1			4
BUCHAREST	81	12	45	3	81
Total NW	**91**	**17**	**73**	**1**	**33**
BIHOR	28	3	14		
BISTRITA NASAUD	5	1			
CLUJ	44	7	28	1	33
MARAMURES	8	3	18		
SALAJ	3	2	9		
SATU MARE	3	1	4		
Total NE	**91**	**33**	**105**	**1**	**47**
BACAU	18	4	20		
BOTOSANI	2				
IASI	48	16	66	1	47
NEAMT	13	4	13		
SUCEAVA	7	9	6		
VASLUI	3				
Total Centre	**95**	**13**	**66**	**4**	**69**
ALBA	13	1			29
BRASOV	52	4	26	2	40
COVASNA	2				
HARGHITA	3				
MURES	13	5	25	2	
SIBIU	12	3	15		
Total South	**33**	**8**	**16**	**2**	
ARGES	10	3	7	1	
CALARASI					
DAMBOVITA	6				
GIURGIU	1	1	7	1	
IALOMITA	3				
PRAHOVA	10	4	2		
TELEORMAN	3				
Total SE	**36**	**7**	**52**	**0**	
BRAILA	5	1	2		
BUZAU	7	4	31		
CONSTANTA	19	1	8		
GALATI	3	1	11		
TULCEA	1				
VRANCEA	1				

Region	Specialist PC Doctors (total)	Specialist PC Doctors (currently working in PC)	PC Nurses	Social workers	Family doctors with basic PC training
Total South West	**8**	**2**	**0**	0	
DOLJ	7	2			
GORJ	0				
MEHEDINTI	0				
OLT	0				
VALCEA	1				
Total West	**41**	**15**	**33**	1	**0**
ARAD	15	5	15		
CARAS SEVERIN	1			1	
HUNEDOARA	11	5	9		
TIMIS	14	5	9		
Grand Total	**480**	**108**	**390**	**12**	**234**

- **Summary of Current Palliative Care Health Professionals**

Palliative Care Doctors - There is a total of 480 specialist palliative care doctors, however, only 23% (108) reported that they are currently working in palliative care. There is no data on why the other 77% specialist palliative care doctors are not currently working in the specialty. Of the specialist doctors who are currently working in palliative care 46% are working in the North-East and North-West Regions, 13% in the West Region, 12% in both the Central Region and Bucharest-Ifov. The southern part of the country has the lowest level of specialist palliative care doctors with only 15% of all the doctors currently working in palliative care working across the three Southern Regions.

Palliative Care Nurses - There are a total 390 palliative care nurses working across the country.178, (46%), are concentrated in two Regions, the North-East and the North-West. The South Region and the South-West Region only have 4% of the palliative care nurses working across both Regions. Across most Regions there are counties without any palliative care nurses. However, the South-West Region stands out as being the most poorly served Region with only 7 doctors and no nurses working in the Region. There are four counties, Calarasi in the Central Region and Gorj, Mehedinti and Olt in the South-West Region that do not have any palliative care professionals working in them.

Family Physicians - The Regional Health Service Plans identify that in 2013, there were 12,736 family physicians that were unevenly spread across the country. In 2014 a pilot project was run to train family physicians in basic palliative care. 234 family physicians from six counites, Bucharest, Ilfov, Iasi, Cluj, Alba and Brasov, received training in the basic level of palliative care. However, this only equates to under 2% of the country's family physicians who have received training in palliative care. It is acknowledged that some of the other family physicians may have undertaken training in basic level palliative care elsewhere, but it is still a challenging position, when over 70% of patients in Romania die at home with little or no palliative care or support. These facts highlight an urgent need for a comprehensive national training and development plan for family physicians

in basic level palliative care and for other initiatives to be introduced to encourage all family doctors to be involved in the care and support of patients who are terminally ill.

4.6 Palliative Care Healthcare Professionals – Staff Required and Gap Analysis

The staffing requirements for each of the three types of palliative care services, has been determined using the ratios set out in section 4.3 of this report. They are set out again below to ensure there is clarity about the methodology used for determining the number of staff required.

Nurse staffing levels for in-patient beds - Some assumptions have been made about how many hours a nurse works annually to enable us to determine the number of nurses required for inpatient beds. These assumptions, and the methodology used, is set out in **Appendix 2**. By understanding the assumptions if they need to be changed, this methodology can still be applied.

Number of palliative care staff required and gap analysis - The number of palliative care healthcare professionals required has been estimated at Regional level, to allow a comparison to be made with what we currently have and what we need. Some assumptions have had to be made as we do not have sufficient data on all professional groups and where they are working. The staffing requirements are set out for each of the three services in the following tables and the gap analysis follows at the end of the section.

- **Palliative Care Inpatient Units – Staffing Requirements per Region**

The staffing requirements for inpatients palliative care units are based on the following ratios:

25 Palliative Care Beds per - 125,000 population
Staffing ratio for palliative care inpatient beds
• 1 doctor with PC subspecialty per 12 beds • 1 nurse with PC specialty per 8 beds per shift (40 hours per week/47 weeks per year) • 1 nurse-assistant per 8 beds per shift (40 hours per week/47weeks per year) • 1 social worker per 25 beds • 0.5 psychologist per 12 beds • 4 – part-time other staff (pphysiotherapist, spiritual counselor)*

	Population	Beds	Doctors	Nurses	Nursing Assistants	Social Worker	Psychologist
North West	**2581768**	**516**	**43**	**301**	**301**	**21**	**22**
North East	**3263564**	**653**	**54**	**380**	**380**	**26**	**27**
Centre	**2346562**	**469**	**39**	**273**	**273**	**19**	**20**
South East	**2481684**	**496**	**41**	**289**	**289**	**20**	**21**
South	**3047055**	**609**	**51**	**355**	**355**	**24**	**25**
South West	**2005253**	**401**	**33**	**234**	**234**	**16**	**17**
West	**1807287**	**361**	**30**	**211**	**211**	**14**	**15**
Bucharest - Ilfov	**2286524**	**457**	**38**	**266**	**266**	**18**	**19**
Total	**19819697**	**3962**	**329**	**2309**	**2309**	**158**	**166**

*Note - it has not been possible to estimate the number 'other' healthcare professionals required. However, they are important members of the palliative care multi-disciplinary team and should be considered when developing and planning new palliative care services.

- **Palliative Care Outpatient Clinics – Staffing Requirements per Region**

The staffing requirements for palliative care outpatient clinics are based on the following ratios:

1 Palliative Care Out-Patient Clinic per 60,000 population
Staffing ratio for palliative care outpatient clinic
• 1 doctor • 1 nurse • 0.5 social worker • Part-time other staff (physiotherapist, spiritual counsellor)

	Population	No. of Outpatient Departments	Doctors	Nurses	Social Workers
North West	2581768	43	43	43	21.5
North East	3263564	54	54	54	27.0
Centre	2346562	39	39	39	19.5
South East	2481684	41	41	41	20.5
South	3047055	50	50	50	25.0
South West	2005253	33	33	33	16.5
West	1807287	30	30	30	15.0
Bucharest - Ilfov	2286524	38	38	38	19.0
Total	19819697	328	328	328	164

- **Palliative Care Home-based Teams – Staffing Requirements per Region**

The staffing requirements for palliative care home-based teams are based on the following ratios:

1 Palliative Care Home-Based Team per 40,000 population
Staffing ratio for home-based team
• 2 doctors • 4 nurses • 1 psychologist • 0.5 physiotherapist

	Population	No. of teams	Doctors	Nurses	Psychologists	Physiotherapists
North West	2581768	64	128	256	64	32.0
North East	3263564	82	164	328	82	41.0
Centre	2346562	59	118	236	59	29.5
South East	2481684	62	124	248	62	31.0
South	3047055	76	152	304	76	38.0
South West	2005253	50	100	200	50	25.0
West	1807287	45	90	180	45	22.5
Bucharest - Ilfov	2286524	57	114	228	57	28.5
Total	19819697	495	990	1980	495	247.5

- **Summary of Palliative Care Staffing Gap Analysis by Professional Group by Region**

The following table shows current number of professional staff, the numbers that are required and the gap between the two. This is set out for each of the different professional groups, for each of the three palliative care services.

As we saw in section 4.2 of this report, (current staffing), some specialist palliative care doctors are not currently working in palliative care. There can be many different reasons why some specialist palliative care doctors are not currently working in palliative care. However, for the purpose of this analysis, we have made an assumption that **all** the current specialist palliative care doctors (those with the competency in specialist palliative care) will, in the future, be working in palliative care.

	Specialist Doctors Current*	Specialist doctors REQUIRED (For beds, OP, and home care teams)	GAP	Nurses current	Specialist Nurses REQUIRED (For beds, OP's and home care teams)	GAP	Social workers current	Social workers REQUIRED (For beds and home care)	GAP
North West	91	214	123	73	600	527	1	42.5	41.5
North East	91	272	181	105	762	657	1	53	52
Centre	95	196	101	66	548	482	4	38.5	34.5
South East	36	206	170	52	578	526	0	40.5	40.5
South	33	253	220	16	709	693	2	49	47
South West	8	166	158	0	467	467	0	32.5	32.5
West	41	150	109	33	421	388	1	29	28
Bucharest - Ilfov	85	190	105	45	532	487	3	37	34
Total	480	1647	1167	390	4617	4227	12	322	310

*Note: Included all doctors with a speciality competence in palliative care

SUMMARY OF GAP ANALYSIS OF PALLIATIVE CARE HEALTH CARE PROFESSIONALS

Based on the 2015 population, the ratios set for staffing palliative services and our understanding of the current number of palliative care healthcare professionals, we have identified there is a need for the following number of **ADDITIONAL** staff:

- **1,167 additional Specialist Palliative Care Doctors**
- **4,227 additional Palliative Care Nurses**
- **310 additional Social Workers for palliative care**

- **Additional 'other' staff such as therapists and psychologists will also be required, but we have not been able to quantify them**

4.7 Conclusions from Palliative Care Needs Assessment Gap Analysis

The assessment of palliative care need has identified there is approximately 172,663 people in need of palliative care every year in Romania. The majority, 73%, suffer from chronic, non-oncological conditions and 20% suffer from terminal oncological conditions. There is a general spread of patients with palliative care needs across the country, but Prahova, Dolj, Constanta, Iasi and Suceava have the highest need for palliative care services. The need is also high in the some of the rural areas, presenting a challenge when designing services to meet this need.

There is a current total of **1,779** palliative care beds in the country, with **1,037 (59%)** being non-fee-paying beds provided by public funding or NGO providers. There is a large disparity of palliative care services between Regions and counites. The Southern part of the country is worst served in terms of palliative care beds and healthcare professionals. There are only 3 palliative care out-patient and 13 palliative home care teams in the country and these are provided by NGOs

Across the whole of Romania, there is a large deficit of specialist palliative care services and specialist palliative care healthcare professionals compared with what is required to meet the palliative care needs of the population. This deficit is greater in the Southern part of the country and in some rural areas than elsewhere in the country. Less than 2% of the family doctors have received training in providing a basic level of palliative care, meaning that palliative care is very underdeveloped at primary care level.

The following table summarises the number of **additional** palliative care services and healthcare professionals (excluding therapists and psychologists) that are required at a Regional level, to meet the palliative care needs of the population.

Additional Palliative Care Services and Healthcare Professionals Required

Region	Regional Population (2015)	Additional PC beds required	Additional PC outpatient clinics required	Additional PC home-teams required	Additional specialist PC doctors required	Additional specialist PC nurses required	Additional PC social workers required
North-West	2,581,768	395	43	64	123	527	41.5
North-East	3,263,564	208	54	80	181	657	52
Centre	2,346,562	357	37	57	101	482	34.5
South-East	2,481,684	441	41	62	170	526	40.5
South	3,047,055	574	50	76	220	693	47
South-West	2,005,253	379	33	50	158	467	32.5
West	1,807,287	229	30	45	109	388	28
Bucharest -	2,286,524	342	37	56	105	487	34

Ilfov							
TOTAL	**19,819,697**	**2925**	**325**	**490**	**1167**	**4227**	**310**

Section 5 - Challenges to Developing Palliative Care Services

Before considering the challenges in developing palliative care services it should be acknowledged that over the last two decades many advances in the development of palliative care have taken place in the Romania. Some of the key milestones are outlined in the timeline below:

- 1992 – Setting up of the first Home-based palliative care services in Brasov
- 1997 – Establishment of a Palliative Care Education Centre in Brasov
- 1998 - Establishment of the National Palliative Care Association (ANIP)
- 1999 - Palliative care acknowledged and national training program for doctors started
- 2001- Oral morphine became available for pain control
- 2002 -The first in-patient Hospice unit was opened in Brasov
- 2002 - Development and agreement of the first national standards for palliative care
- 2003 - Hospice Casa Sperantei recognised as a 'Beacon of Excellence' for palliative care in Eastern Europe
- 2005-2007 – New opioids law passed that allows all registered doctors to prescribe medication for pain relief
- 2005 – Palliative care in-patient units introduced and funded in the Frame-Contract with the House of Health Insurances (HoHI)
- 2007 - First public reimbursement by the HoHI for palliative care admissions to inpatient units
- 2007-2008 - Public awareness campaign and national survey regarding palliative care
- 2007 - First palliative care departments in public hospital (Pascani and Stefanesti)
- 2008 - Partnership between Ministry of Health, Hospice and the National Federation of Cancer Patients Associations
- 2008 - 2010 – Palliative care costing project & national impact on funding mechanisms
- 2009 - Introduction of a Curricula for palliative care for nurses in basic training
- 2010 - Home-based palliative care services acknowledged
- 2010 - First Master programme in palliative care provided (Brasov Medical Faculty)
- 2010 - Palliative care standards revised
- 2011- Five medical faculties in Romania introduce palliative care in the basic studies curricula
- 2012 - National Strategy for palliative care proposed to the Ministry of Health
- 2013 - Ministry of Health announce commitment towards a National Program for palliative care
- 2013-2016 - Establishment of a pilot project to develop basic palliative care in community
- 2014-2020 - World Bank project for the reform of health services includes pallaitive care in programme
- 2017 - Palliative care specialty for nurses acknowledged

These major initiatives have helped to move palliative care forward in Romania and have laid the foundations for establishing new palliative care services. However, it should be noted that many of

these initiatives have taken many years to achieve, have not been resourced by government funding and have not been part of a wider national health service strategy. Many of the initiative to support the development of palliative care nationally have relied on funding from grants or charitable sources. They have been driven by the commitment of a few passionate individuals who have had the tenacity to bring about the changes needed to improve the lives of those who are terminally ill or suffering from life-limiting conditions.

Now that palliative care has been included in the government's National Health Strategy and is part of the World Bank Health Care Reform programme, there is the opportunity for palliative care to become an integral part of the healthcare system in Romania. However, it will need to be properly resourced and planned to ensure the changes introduced achieve the maximum benefits for all those needing palliative care. Romania faces many challenges in developing palliative care services in the coming years. From our needs analysis we have identified that the three biggest challenges are:

- the amount of unmet palliative care need across the county
- the availability of palliative care healthcare professionals to meet that need
- the availability of sufficient public funding to sustain the current palliative care services and develop new services

The World Health Organisation (WHO) have developed a model for assessing the challenges in developing palliative care services. This model identifies four key areas that Stjernsward et al (2007) [33] suggests all need to be addressed for '*palliative care to become part of mainstream healthcare'.* Stjernsward also acknowledges that these four areas can only be dealt within the context of the culture, demographics, socioeconomic and healthcare system of the country.

Figure 15 – WHO Public Health Model

To summarise the challenges facing Romania in developing palliative care services in the coming years we have incorporated the areas from the WHO model into a strengths, weaknesses, opportunities and threats (SWOT) analysis. This is set out in the table on the following page.

SWOT Analysis for Developing New Palliative Care Services in Romania

Strengths	Weaknesses
Policy • Palliative care is now included in the national heath strategy and some palliative care services are now included in the House of Insurance funding arrangements **Drug availability** • Some regulations on medication have changed to make the provision of palliative care easier e.g. regulations on opioids **Implementation:** • There is knowledge and experience of implementing palliative care services in some parts of the country which can be used to help develop services elsewhere • There is expertise and leadership at a national level, both from individuals and the National Association of Palliative Care to influence and help lead the development of palliative care in Romania • Palliative Care standards have been developed and some protocols are available **Education** • The national training centre in Brasov provides a range of different professional training programmes in palliative care • Five medical faculties in Romania have introduce palliative care in the basic training curriculum • The speciality of palliative care has been recognised by the national nursing association	**Policy** • Low level of overall funding for healthcare in Romania • Competing demands for healthcare funding and improvements • Inflexible and out-dated public funding arrangements that make developing new models of care difficult • Political bureaucracy, at all levels, which protracts the time to achieve and implement change **Drug availability** • Cost of medication • Further changes required in regulations around the use of medication for palliative care • Availability of some medication **Implementation** • High need for palliative care services with a low level of service coverage currently • Limited availability of specialist palliative care health care professionals • Few plans or ownership, at local and national level, for implementing new palliative care services • Health system infrastructure (underdeveloped primary, community and ambulatory care) **Education** • Level of understanding of the principles and benefits of palliative care by policy makers, professionals and the public • Limited number of family doctors with basic training in palliative care • Funding and availability for training specialist palliative care doctors and other healthcare professionals
Opportunities	**Threats**
Policy • World Bank Health Reform project includes palliative care with targets to achieve • National Health strategy supports the development of primary, ambulatory, community and palliative care services • Some policy and funding changes are slowly being introduced at government and funding level which will support the development of palliative care nationally **Implementation:** • Increasing number of palliative care professionals getting involved with the palliative care programme • Opportunity to start implementation of some new palliative care services in 2018/19 **Education:** • Professional networks – large number of international professionals in palliative care to network with and share best practice • Opportunity to develop more specialist palliative care nurses now specialty has been recognised	**Policy** • Improvements in other parts of the healthcare system take priority over the development of palliative care • The acute sector hospital building programme 'swallows-up' more of the World Bank funding than initially agreed and primary, community, and palliative care developments are not funded • On-going revenue funding for palliative care services is not made available **Drug availability** • Drug costs increase • Further changes in drug legislation is not agreed **Implementation** • Demographic changes increase the unmet need for palliative care services even further • Migration causes the loss of more healthcare professionals from Romania **Education** • Education programmes not funded or not able to keep up with demand for training by healthcare professionals • Insufficient staff available for specialist PC programmes

SECTION 6 – Final Summary and Proposed Way Forward

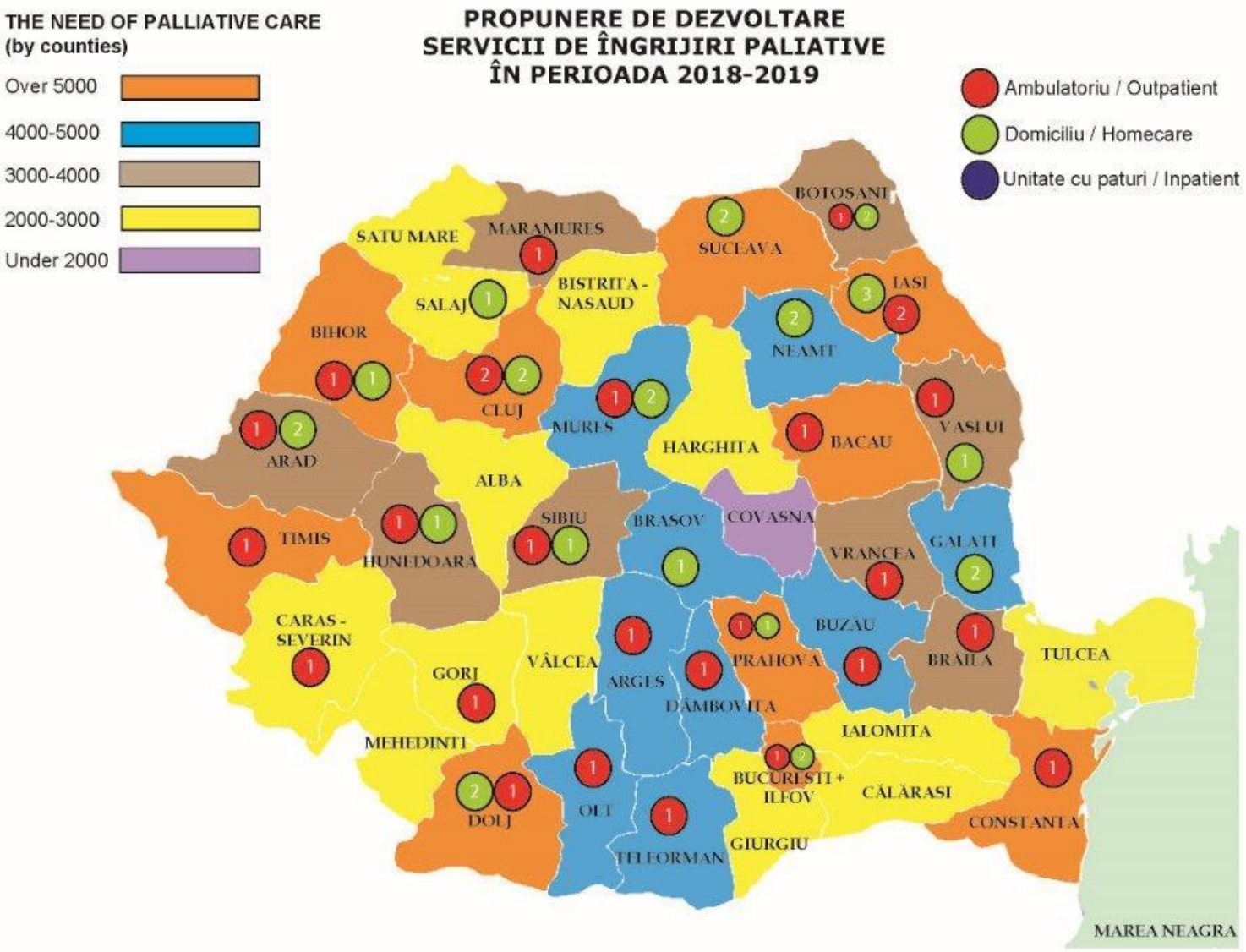
The population in Europe, including Romania, is ageing. More people are now living longer with the effects of serious chronic illnesses towards the end of their life. Palliative care seeks to relieve suffering and improve the quality of life for people with life-limiting conditions. It is a holistic approach that improves the quality of life for patients and their families by addressing the physical, psychosocial and spiritual needs associated with life-threatening illness. Traditionally, palliative care was offered mostly to cancer patients, but internationally it is now being offered to people with a wider range of serious illnesses. The World Health Organisation identify access to palliative care and pain relief as a '*basic human right of health*'.

This analysis of palliative care need in Romania has identified there are over 170,000 people annually in Romania who would benefit from palliative care, if palliative care services and healthcare professionals were they available and accessible. This assessment of current and required palliative care services and healthcare professionals has identified a large deficient in both palliative care services and healthcare professionals across all Regions and counties in Romania, with the Southern part of the country and rural areas being the worst affected.

The Romanian National Health Strategy 2014 – 2020, has set an ambitious strategic objective of reaching 60% coverage for palliative care by 2020. The World Bank '*Health Sector Reform – Improving Health System Quality and Efficiency Project* has set a target of providing an additional 29 palliative care departments within hospitals, 90 new palliative care out-patient departments and 90 new palliative care home-based teams across Romania over the next few years.

In determining the best approach to implementing new palliative care services in Romania several factors were taken into consideration including, identifying the areas where there is the greatest palliative care need, reviewing where there are currently the lowest number of palliative care services available and ascertaining where there are palliative care doctors who are available and interested in establishing new services. Using these criteria, the Palliative Care Technical Working Group identified that with the current financial and human resources available, the greatest palliative care coverage will be achieved by establishing new palliative care out-patient and home-based teams in the first instance, rather than setting up new in-patient palliative care facilities, which would cost more and take longer to establish.

Through this needs analysis, and by surveying palliative care doctors, we have identified the counties with the greatest palliative care need and where there are palliative care healthcare professionals ready to set up palliative care out-patient and home care services. 27 locations for new palliative care out-patient clinics and 28 locations for new home-based palliative care teams have been identified. The map on the following page shows the proposed locations and numbers of new palliative care out-patient and home care teams to be established during 2018-19. Further work will be required to develop a longer-term plan for the continual development of palliative care in Romania in the future.


THE NEED OF PALLIATIVE CARE
(by counties)
Over 5000
4000-5000
3000-4000
2000-3000
Under 2000
PROPUNERE DE DEZVOLTARE
SERVICII DE ÎNGRIJIRI PALIATIVE
ÎN PERIOADA 2018-2019
Ambulatoriu / Outpatient
Domiciliu / Homecare
Unitate cu paturi / Inpatient
SATU MARE
MARAMURES
BOTOSANI
SUCEAVA
BISTRITA - NASAUD
SALAJ
IASI
BIHOR
NEAMT
CLUJ
MURES
HARGHITA
BACAU
VASLUI
ARAD
ALBA
SIBIU
BRASOV
COVASNA
GALATI
TIMIS
HUNEDOARA
VRANCEA
CARAS - SEVERIN
BUZAU
BRAILA
TULCEA
GORJ
VÂLCEA
ARGES
PRAHOVA
DÂMBOVITA
IALOMITA
MEHEDINTI
BUCURESTI + ILFOV
CĂLĂRASI
CONSTANTA
OLT
DOLJ
TELEORMAN
GIURGIU
MAREA NEAGRA

Appendix 1

World Health Organisation Definitions of Palliative Care

Palliative Care:

- provides relief from pain and other distressing symptoms;
- affirms life and regards dying as a normal process;
- intends neither to hasten or postpone death;
- integrates the psychological and spiritual aspects of patient care;
- offers a support system to help patients live as actively as possible until death;
- offers a support system to help the family cope during the patient's illness and in their own bereavement;
- uses a team approach to address the needs of patients and their families, including bereavement counselling, if indicated;
- will enhance quality of life, and may also positively influence the course of illness;
- is applicable early in the course of illness, in conjunction with other therapies that are intended to prolong life, such as chemotherapy or radiation therapy, and includes those investigations needed to better understand and manage distressing clinical complications

Source: World Health Organisation (2002)

Palliative care for children represents a special, albeit closely related field to adult palliative care. The WHO's definition of palliative care for children is set out below:

Paediatric Palliative Care

- Palliative care for children is the active total care of the child's body, mind and spirit, and also involves giving support to the family.
- It begins when illness is diagnosed, and continues regardless of whether, or, not a child receives treatment directed at the disease.
- Health providers must evaluate and alleviate a child's physical, psychological, and social distress.
- Effective palliative care requires a broad multidisciplinary approach that includes the family and makes use of available community resources; it can be successfully implemented even if resources are limited.
- It can be provided in tertiary care facilities, in community health centres and even in children's homes.

Source: *World Health Organisation, (2002)*

Appendix 2

Assumptions and Method for Calculating Nurse Staffing for In-patient Units

Nurse Staffing Ratios:

- 1 nurse with PC specialty per 8 beds for each shift
- 1 nurse-assistant per 8 beds per shift

Assumptions:

- 1 nurse/nursing assistant works 40 hours per week for 47 weeks of the year (5 weeks for annual leave, sick leave and study leave) = 47 (weeks) x 40 (hours) = 1880 hours available per nurse per year to work
- Shift patterns are based on three 8-hours shifts each day

Example: Methodology based on 516 beds in one Region:

- 516 (beds) divided by 8 (1 nurse to 8 beds) = 64.5 nurses per shift for 516 beds
- 64.5 (nurses) x 24 (hours) = 1548 hours per day
- 1548 (hours) x 365 (days in year) = 565020 hours worked in a year
- 565020 (hours in year) divided by 1880 (hours per individual nurse) = 301 nurses

Total 301 nurses required to cover 516 beds (7 days a week, 365 days a year)

References:

1. WHO Definition of Palliative Care, http://www.who.int/cancer/palliative/definition/en/.
2. WHO Factsheet on Palliative Care, August 2017, http://www.who.int/mediacentre/factsheets/fs402/en/.
3. Dumitrescu, M & Poroch, V, The National Association for Palliative Care: Quality assurance for palliative care in Romania, European Journal of Palliative Care 2016; 23(6)
4. Global Atlas Identifies Unmet Need for Palliative Care, January 28, 2014, http://www.who.int/mediacentre/news/releases/2014/palliative-care-20140128/en/.
5. World Atlas http://www.worldatlas.com/articles/what-type-of-government-does-romania-have.html
6. Romania in Figures, Institute of National Statistics, 2015
7. World Bank, Country partnership strategy for Romania for the period 2014-2017 (April 2014) http://documents.worldbank.org/curated/en/801961468095641262/Romania-Country-partnership-strategy-for-the-period-FY2014-2017
8. People at risk of poverty or social exclusion, http://ec.europa.eu/eurostat/statistics-explained/index.php/People_at_risk_of_poverty_or_social_exclusion
9. Human Development Index http://hdr.undp.org/en/composite/HDI
10. Romania National Institute of Statistics, Demographics of Romania, 2013, http://www.insse.ro/cms/files/publicatii/pliante%20statistice/12_Brosura%20Demo%20eng.pdf
11. Breaking the Cycle of Exclusion for Roma in Romania http://www.worldbank.org/en/news/feature/2014/04/07/breaking-the-cycle-of-exclusion-for-roma-in-romania
12. European Observatory on Health Systems and Policy, Health System in Transition, Romania Health System Review, Vol 18 No. 4 1016
13. Romanian Ministry of Health, Regional Health Services Plans, November 2016
14. Romanian Ministry of Health, National Health Strategy 2014 – 2020
15. World Bank, http://www.worldbank.org/en/country/romania/overview
16. Romanian National Association for Palliative Care (2014), Palliative Care Services Register.
17. Peter Tebbit Population Based Needs Assessment for Palliative Care. National Council for Palliative Care Services, May 2004
18. National Institute of Statistics Press Communication August 2017, http://www.insse.ro/cms/sites/default/files/com_presa/com_pdf/poprez_ian2017e.pdf
19. Romania Institute of National Statistics, Press Release, October 2017 http://www.insse.ro/cms/sites/default/files/com_presa/com_pdf/popdom1iul2017e_0.pdf
20. Romanian Institute of National Statistics (July 2017)
21. Life Expectancy, Romania National Institute of Statistics (2013*)*
22. Vasile V, Dobre A, Overview of demographic evolution in Romania, *RRS*, 2015; 4: 27–45.
23. OECD (2017), "Romania", in *International Migration Outlook 2017*, OECD Publishing, Paris. http://dx.doi.org/10.1787/migr_outlook-2017-35-en
24. Mortality Rates, https://knoema.com/atlas/Romania/Death-rate
25. *Worldwide: IARC CancerBase No. 11 [Internet].* Lyon, France: International Agency for Research on Cancer; 2013. http://globocan.iarc.fr, accessed on
26. Ferlay J., Steliarova-Foucher E., Lortet-Tieulent J., Rosso S., Coebergh J.W.W., Comber H., Forman D., Bray F., *Cancer incidence and mortality patterns in Europe: estimates for 40 countries in 2012,* Eur. J. Cancer, 2013, *49(6),* 1374-1403.
27. Romanian Institute of National Statistics (2016)

28. Stjernsward J in Doyle D. at all, Oxford Textbook of Palliative Care, Oxford Univ. Press ed. 2005
29. Higginson I. Health care needs assessment: palliative and terminal care. In: Stevens A, Raftery J, editors. Health care needs assessment. Oxford: Radcliffe Medical Press; 1997. p. 1–28.
30. Romania Directory of Palliative Care Services (2016), Association of Palliative Care in Association with Hospice Casa Sperantei
31. Survey of Palliative Care Providers in Romania, (2016) undertaken by the Palliative Care Technical Group
32. Woolf S.H, Gro R., Hutchinson, H., Eccles, M. and Grimshaw, J. Potential benefits, limitations, and harms of clinical guidelines, BMJ. 1999 Feb 20; 318(7182): 527–530
33. Stjernward, J, Foley K.M., & Ferris D. The Public Health Strategy for Palliative Care, Journal of Pain and Symptom Management, Vol 33 No. 5 May 2007