

מאיירס - ג'זינט - מכון ברזקדייל
MYERS - JDC - BROOKDALE INSTITUTE
مایرس - جوینت - معهد بروکدیل



CENTER FOR RESEARCH ON AGING

Use of Healthcare Services, Quality and Cost of Care of Terminal Cancer Patients

Netta Bentur ♦ Shirli Resnizky
Sophia Eilat-Tsanani ♦ Ran Balicer

The study was conducted with the support of a grant from
Guy and Nora Barron, Michigan



RESEARCH REPORT

RR-647-13

Use of Healthcare Services, Quality and Cost of Care of Terminal Cancer Patients

Netta Bentur¹ Shirli Resnizky¹ Sophia Eilat-Tsanani² Ran Balicer³

The study was conducted with the support of a grant from
Guy and Nora Barron, Michigan

¹ Myers-JDC-Brookdale Institute, Jerusalem, Israel

² MD, Department of Family Medicine, Faculty of Medicine in the Galilee, Bar-Ilan University, Safed, Israel, North Region, Clalit Health Services

³ MD, Clalit Health Services, Tel-Aviv, and Ben Gurion University of the Negev, Beer-Sheva, Israel

Translation from the Hebrew: Evelyn Abel
Layout and print production: Leslie Klineman

Myers-JDC-Brookdale Institute

P.O.B. 3886

Jerusalem 91037, Israel

Tel: (02) 655-7400

Fax: (02) 561-2391

Web site: www.jdc.org.il/brookdale



Related Myers-JDC-Brookdale Institute Publications

Bentur, N.; Resnizky, S. 2009. *Spiritual Care in Israel: An Evaluation of the Programs Funded by the UJA-Federation of New York*. RR-526-09 (English), RR-530-09 (Hebrew)

Bentur, N.; Chekhmir, S. Szlaifer, M.; Singer, Y.; Schwartzman, P. 2007. *Nationwide Palliative Training Program in Israel: Evaluations Study*. RR-498-07.

Bentur, N.; Resnizky, S.; Shnoor, Y. 2005. *Palliative and Hospice Services in Israel*. RR-459-05.

Primak, H.; Brodsky, J. 1995. *Hospice Services in Israel*. RR-233-95.

To order these publications, please contact the Myers-JDC-Brookdale Institute, P.O.B. 3886, Jerusalem, 91037; Tel: (02) 655-7400; Fax: (02) 561-2391; E-mail: brook@jdc.org.il

These reports are available on the Institute website.

Executive Summary

1. Introduction and Study Goals

In recent decades, end of life care has become of central concern to health systems. The aging of the population, changes in morbidity that have caused a shift from care of acute illnesses to chronic ones, and the increase in cancer morbidity and mortality rates have heightened the need to care for people whose deterioration is gradual and whose suffering is protracted.

Since many of those suffering with cancer are older adults, and since their physical functions, health and social status are highly variable, the challenge to assess them properly and optimize their individual treatment is growing. There is a widespread appreciation that geriatric-specific orientation and tools can help better define standard care for older individuals with cancer.

Health systems in the west have come to realize that palliative services – services that improve the quality of life of patients and their families facing problems associated with life-threatening illness - are the most appropriate for patients at the end of life. Palliative care relieves suffering by means of early identification, assessment and treatment of pain and other physical, psychosocial and spiritual problems.

However, according to epidemiological research and assessments, only about 10%-15% of Israeli cancer patients receive palliative care. The approaches and care concerning patients of metastasized cancer are far from satisfactory. Patients and families feel helpless and frustrated in view of the limited services available, the absence of information and the lack of awareness about the provision of suitable care during this last period of life. Therefore, this study aims: to broaden the understanding of how to improve services for cancer patients; to assess the quality of care provided by different frameworks; and to compare the costs of care provided by them. The study follows previous studies on hospice and palliative care carried out by the Institute, with the support of the Jewish federations of Detroit and New York. These studies played a major role in the development of the model of hospice in Israel and in the decision by the Ministry of Health to issue directives (issued by the Ministry's director general in 2009 defining standards for the development and provision of palliative care in health settings.)

In this study, we are specifically interested in the quality and cost of care for patients who received home-hospice in comparison to other frameworks of care, such as community clinics, general hospitals, oncology day-hospitals, and nursing homes.

The study aims to assist the Ministry of Health in the ongoing implementation of the directives and promote the ongoing development of effective hospice care.

2. Study Design

The study design had two components:

- a) An analysis of the administrative data on all patients who had died of metastasized cancer in the northern district of the Clalit health plan during a nine-month period from December 2008 to August 2009. Data that was collected included services used by patients and the costs incurred.
- b) Personal interviews with family members of the deceased provided information on quality of treatment.

The study target population comprised 559 deceased people who had died in the given nine months from a malignant illness, according to the Clalit health plan register. Of these, 429 (75%) matched the study requirements. The other 25% had suffered from a malignant illness at some point in their lives, as noted in the list of their diagnoses, but this illness had not been the cause of death. Personal interviews were conducted with family members of 193 deceased (45%). In the case of more than half of the deceased (55%), there were no interviews with family members for various reasons: some refused, some were away, and some could not be contacted.

3. Summary of Findings

Characteristics of the Population

Slightly more than half the patients who died of metastasized cancer (56%) were men. Their average age was 69, 33% were 64 or less, 41% were 65-79, and 26% were 80 and over. Close to half (44%) were native Israelis, and 30% had immigrated since 1990, mostly from the former Soviet Union (FSU). Similar to the district population, 73% were Jews and 27% Arabs. Twenty-nine percent were from the Galilee Administrative region; 39% from the Amakim Administrative region and 32% from the Nazareth Administrative region.

Use of Healthcare Services and Cost of Care

The vast majority of patients (95%) had visited (or been visited by) a family physician once a week on average, and most (87%) had been hospitalized for 19 days on average during their last six months. Forty-eight percent had visited the emergency room an average of two times, and 42% had been treated with chemotherapy or radiotherapy in day-hospital, receiving an average of 7.5 treatments. Fifty-nine percent had been treated with opiate medication in the last six months of life. More than half of service usage occurred during the patients' last six months - particularly the rate of hospitalization and emergency room visits (68% were hospitalized in their final month and 20% visited to the emergency room). Yet only 48% received opiate medication for pain relief in the last month of life.

The *average cost* of care per patient¹ in the last six months of life was NIS 63,586. The large standard deviation (NIS 67,596) and the median (NIS 46,717) reveal that a small number of "very expensive" patients raised the average cost per patient. The average cost of care per patient in the final two months was NIS 37,715, i.e., 59% of the total average cost in the last six months; here too, the standard deviation (NIS 30,330) and the median (NIS 22,913) reveal that a few patients were particularly expensive.

Two-thirds (68%) of the expenses in the last six months of life were incurred for general hospitalization while the remainder went toward medications, home-hospice, oncology day-hospital and nursing homes (in the northern district, nursing homes serve as an alternative to inpatient hospice care). These costs do not include services and treatment received at the health-plan clinic - such as visits to a physician or a nurse, or the receipt of medication. In the last two months of life, the proportion of costs for general hospitalization rose from 68% to 76% while the proportion of the other components decreased somewhat.

Perceived Quality of Care

We asked the family members of the 193 deceased to cite the dominant care provider (DCP) during the acute, severe stage of the illness as defined by family members (a period of 77 days on average). They pointed to five DCPs: 36% cited the community clinic; 20% – the day-hospital unit; 18% – the hospital; 16% – the nursing home; and only 10% – the home-hospice unit.

Twenty-five per cent of the 193 deceased (49 patients) whose relatives were interviewed had received home-hospice care, yet home-hospice care was the DCP for only 10% (20 patients). For the remaining 15% (29 patients), other care providers were dominant.

The *quality of care* of patients who had died of cancer was examined by means of four parameters commonly used in the literature: contact with the physician; the professionalism of the nurses and physicians; communication with and involvement of the patient in decision making; and the personal wellbeing of the main family caregiver. For the first three parameters, the quality of care was found to differ by DCP: home-hospice as the DCP received the highest average score, followed by the day-hospital unit. The scores for the community clinics, the general hospitals and nursing homes were lower. Overall, the average score for the personal wellbeing of the caregiver parameter was lower than for the other three, which relate to direct patient care, and no differences were found between the five DCPs.

When controlling for age, gender and population group (Jews/non-Jews), there was a significant relationship to higher scores for the three first parameters (i.e. all parameters except personal wellbeing) when the place of death was at home compared to at the hospital or at a nursing home. When DCP was home-hospice care there was a significant relationship with higher scores for contact with the physician and the professionalism of the nurses and physician. When DCP was

¹ The cost shown is a similar price, but is **not** identical to the real price. For this purpose we used the base price as 100 and then standardize the rest of the costs according to the ratio between lowest cost and the base.

oncology day-hospitals there was a relationship with higher scores for the professionalism of the nurses and physicians and communication on decision making.

Characteristics of Home-Hospice Care vs. Care Provided by Other Health Services

We found that a similar proportion of patients who received home-hospice care – whether or not they had chosen it as the dominant care provider – received opiate medication in the severe, final stage of illness (95% and 90% respectively), whereas only 68% of patients without home-hospice care received such medication. Additionally, when home-hospice was the chosen DCP (hereafter, home-hospice/DCP) caregivers believed that the patient's receipt of pain-management medication had been appropriate (87%) compared to when patients were treated by home-hospice not as the chosen DCP (73%, hereafter, home-hospice/non-DCP) or not treated by home-hospice at all (72%, hereafter, no home-hospice). The advantage of home-hospice/DCP was especially prominent in the treatment of emotional symptoms. Thus, 88% of family members of patients with home-hospice/DCP reported that the patient had been treated for anxiety, and 78% reported that the patient had been treated for depression as compared with only about a third of the family members who reported treatment for anxiety in the other two groups. Lastly, palliative sedation as part of the treatment was much higher among those with home-hospice/DCP than in the other two groups (45% and 25% respectively).

Far more patients with home-hospice/DCP were treated according to the principles of palliative care (receiving explanations on patient rights, including the patient and the family members in decision making, continuity of care, writing advance directives, dying at one's place of choice, foregoing curative medication at the end of life etc.) than did patients with home-hospice/non-DCP or patients with no home-hospice.

The average cost of care in the last six months of patients with home-hospice/DCP was 15% lower than the average cost for patients with home-hospice/non-DCP, and 26% lower than for patients with no home-hospice. The gap between the groups widened in the last two months of life: the average cost of care of patients with home-hospice/DCP was 30% lower than for patients with home-hospice/non-DCP, and 42% lower than for patients with no home-hospice. Hospitalization accounted for 24% of the costs of patients with home-hospice/DCP, 37% of the costs of patients with home-hospice/non-DCP, and 64% of the total expenditure for patients with no home-hospice.

4. Conclusions and Programmatic Directions

The study yielded significant information concerning the care of patients with cancer in Israel. It provides a basis for improving the services and the quality of life of the dying patients and their families. The following are among the major discoveries:

- ◆ About two-thirds of the patients in this study who died of metastasized cancer were age 65+ and about a quarter were 80+, similar to rates in other Western countries. For many reasons, older adults with cancer have different needs than younger adults with the disease. Treatment for older adults needs to consider many issues and therefore the field of geriatric-oncology has been developing rapidly during the last decade. While information on the needs of elderly

patients suffering from and dying of cancer has grown globally, in Israel more attention for the special needs of this group is required, and a palliative approach needs to be developed. We should expand our knowledge, awareness and understanding of palliative care for severely ill older adults while addressing their characteristics – a field that is far from satisfactory in Israel.

- ◆ Half of the patients received opiate medication for pain relief though the vast majority of patients with metastasized cancer suffer from pain and, in their case, opiate medication is considered best practice. Thus, there is an urgent need to examine the knowledge and approaches of family and hospital physicians concerning the indications for these medications. If necessary, educational activity and instruction should be offered on the subject.
- ◆ Although the patients were treated concomitantly by many providers at the end of life, family members were nonetheless able to point to the dominant care provider: only about 10% of the family members cited home-hospice as the DCP in the final stages of the patient's life, although there are two home-hospice units in the northern district. An additional 15% of the patients also received home-hospice care, but it was not cited as their DCP. The low utilization rate of home-hospice/DCP appears to be one of the most important challenges to emerge from the study. The challenge requires further understanding in order to expand the utilization rate of home-hospice services. For this purpose, discussions might be held with the district directors of the health plan, the directors of the home-hospice units and of other district services to examine the patterns of referral to home-hospice and to discuss with them the possibilities for expanding referrals. Discussion should also be held with other key parties and decision makers in the district who might be able to help increase both the referrals to home-hospice and its involvement in the care of terminal patients.
- ◆ The advantage of home-hospice as the dominant care provider was striking. Patients treated by home-hospice received more doses of opiate medication, and many more of them were treated for emotional symptoms such as anxiety and depression. In addition, most died, according to their wishes, at home, as compared to less than a third of the patients with home-hospice/non-DCP or with no home-hospice - about 70% of whom had wished to die at home. This finding emphasizes the need to make every effort to supply services that respect a patient's wishes to die at home. At the same time, thought should be given to the burden carried by family members and to responding to their needs to the extent possible.
- ◆ In all settings, the average score for the three parameters of quality of care, which relate to direct patient care (contact with physician, professionalism of the nurses and physicians and communication), was higher than the average score for the caregiver's personal wellbeing, despite the importance attributed to the difficulties of the main caregivers of the severely ill. This issue requires further consideration. Ways should be found to provide more support through social services, support groups and other means to family members caring for the severely ill at the end of life.

- ◆ As opposed to other services, the home-hospice and the oncology day-hospital in Nazareth showed a distinct preference for caring according to palliative principle. It is therefore important to provide palliative care education and training to the medical staff of community clinics and hospitals that bear the burden of care for most of these patients.
- ◆ The patients used many services near the end of their life, especially in the last two months. The average cost of care per patient exceeded sixty thousand NIS in the last six months of life; about 60% of this sum was incurred in the last two months of life, and about half was spent on hospitalization. The cost of care for a few patients was much higher than the average cost, amounting to hundreds of thousands of shekels in a six-month period. Consequently, there is a need to deepen the investigation of the services and treatments received by the particularly "expensive" terminal patients. The efficiency of their care, whether there were alternatives, and, if so, whether they were considered or offered to patients needs to be examined.
- ◆ The cost of care in the last six months of patients treated by home-hospice/DCP was lower than the cost of care of patients treated by home-hospice/non-DCP or no home-hospice. This difference – due largely to the cost of general hospitalization – was particularly evident in the last two months of life, amounting to as much as 40% of their cost of care in comparison with costs for patients not treated by home-hospice.
- ◆ In light of the study findings on the advantage of home-hospice in terms of both quality of care and cost, greater utilization of this service may lower the costs of care - perhaps for the most expensive patients in particular - without detracting from - indeed, even while improving – the quality of care.
- ◆ The present study was limited in that about half of the family members of the deceased were not interviewed and they differ somewhat in characteristics from the family members who were interviewed. This limitation stems from restrictions imposed by the ethics committees (Helsinki committees), and from the study design, which made it necessary to contact family members through the family physician. Thus, only community treated patients could be approached. The examination of quality of care may therefore have focused on patients who received more treatment than others did.

In summary, the study findings reveal that despite the quality of care of patients treated by home-hospice services - which are based on the principles of the palliative approach - being higher and the cost of care being lower than those of patients who received the other methods of end of life care, few patients received these services. Every effort should be made to increase the number of patients treated by palliative services at the end of life to improve both the efficiency and the quality of care of these patients.

The findings were presented to decision-makers in Israel's Ministry of Health, to health plans and to service providers as well as to the UJA Federation of New York and other involved organizations. The study provides insight into decision-making and policymaking regarding the development of palliative services and hospice units in hospitals and the community. It serves as

an informed basis for the continuing implementation of the directives of the director-general of the Ministry of Health requiring all healthcare settings to implement palliative care for patients suffering from incurable diseases within three years. The research team continues to be involved in the development and evaluation of these processes.

The study was conducted with the support of a grant from Guy and Nora Barron, Michigan.

Acknowledgments

We wish to thank the many people who generously assisted us in conducting this study and in writing the report. We thank the management of the North Region of Clalit Health Services and Regional Director Tzipi Sadeh for welcoming and supporting the study team and enabling this study to go forth. We thank the directors of the North Region home-hospice units – Bayit Ba'amakim and Galil Elyon - who deepened our understanding of the issues and assisted us in carrying out the study.

We particularly wish to thank Nora and Guy Barron for the great importance that they saw in services for people at the end of life and as a result their ideological and financial support of our work on this important issue and for many useful conversations about the development of palliative care in the US. We also wish to thank them for their input during a previous study that reviewed palliative services in Israel. Thanks are also due to the UJA Federations of Detroit and New York for their longstanding support of palliative and hospice services in Israel and for their support of two previous Institute studies on these issues.

We thank our colleagues at MJB who assisted us with their comments and advice. Thanks are due to Jack Habib, Jenny Brodsky and Suzanne Brown for their contribution and important comments during the writing of the report. Warmest thanks to Jenny Rosenfeld, chief editor at MJB for her support and assistance in producing this report, to Evelyn Abel for the translation into English and to Leslie Klineman for preparing it for publication.

Table of Contents

1. Introduction and Study Goals	1
2. Study Design	4
2.1 Study Population	4
2.2 Methods and Research Tools	6
3. Findings	6
3.1 Population Characteristics	6
3.2 Patterns of Use of Healthcare Services	6
3.3. Cost of Care	9
3.4 Perceived Quality of Care	11
3.5 Home-Hospice Care	14
4. Summary	20
Appendix 1: Characteristics of Patients who Died of Metastasized Cancer, by Patterns of Care in the Last Half Year of Life	25
List of References	22

List of Tables

Table 1: Usage of Services in the Last Half Year of Life of Deceased Cancer Patients, by Characteristics of the Patients and of the Service System (Logistic Regression)	9
Table 2: Quality of Care in Four Parameters, by Characteristics of Patients and Service Usage (Multivariate Regression)	14

List of Tables in Appendix I

Table I-1: Characteristics of Patients who Died of Metastasized Cancer, by Patterns of Care in the Last Half Year of Life	25
---	----

List of Figures

Figure 1: Study Population	5
Figure 2: Health Service Usage	7
Figure 3: Use of In-Patient Services, by Month, in Last Six Months of Life	8
Figure 4: Average Cost per Patient, by Month, in Last Six Months of Life	10
Figure 5: Distribution of Expenditure. What is the Money Spent On?	11
Figure 6: The Dominant Care Provider in the Final Stage of the Illness	12
Figure 7: Reported Quality of Care: Average Score on CANHELP Parameters (Range 0-100)	13
Figure 8: Comparison of Treatment of Symptoms in the Final Stage of the Illness	16
Figure 9: Place of Death	17
Figure 10: Palliative Care Treatment Received in the Final Stage of the Illness	18
Figure 11: Average Cost per Patient	19
Figure 12: Distribution of Expenses	20