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Lien Centre for Palliative Care Policy Brief 2

End of Life Utilization and Costs and the Role of Palliative Care in Treating Patients with Advanced Cancer

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Key Messages

1. Data from the COMPASS cohort study reveal that many advanced cancer patients in Singapore receive costly and aggressive care in their final months of life.
2. Evidence from the global literature suggests that palliative care may reduce both end-of-life patient suffering and health care costs.
3. Among patients in the COMPASS study, lack of awareness of palliative care is widespread.
4. Seventy percent of COMPASS patients who died received no palliative care.
5. Singapore should take steps to increase community awareness of the benefits of palliative care.
6. To reach more patients, efforts should be undertaken to expand the number of specialist palliative care providers and to train generalists in select palliative care services.
7. Reimbursement policies should be enacted to incentivize physician referrals to palliative services.

Most advanced cancer patients in Singapore receive costly end-of-life care

There is concern that patients with life limiting illnesses too often receive high-cost, cost-ineffective care that is largely futile or even harmful, resulting in reduced quality of care.[1,2] The Cost of Medical Care of Patients with Advanced Serious Illness in Singapore (COMPASS) cohort study sheds light on these issues. COMPASS is a prospective, longitudinal study of 600 advanced cancer patients in Singapore. The study was designed to capture patients' healthcare utilization, associated costs, perceptions of the quality of care, and quality of life via surveys collected every four months until death. Patients' medical and billing data were obtained from the two main speciality hospitals in the country: Singapore General Hospital and National

University Hospital Singapore. The former includes data from the National Cancer Centre Singapore, the largest outpatient cancer centre in Singapore.

Using the medical and billing records of deceased COMPASS participants, our results reveal that advanced cancer patients in Singapore incurred hospital costs of $61,680 (in 2019 Singapore dollars), on average, during their last year of life and $8,350, on average, during their last month of life.[3] In comparison, these costs are higher than end-of-life costs among advanced cancer patients in Japan, France, and the Netherlands,[4-6] but lower than those in the US, where costs tend to be higher due to generous public insurance coverage for elderly Americans.[7-10]

Part of the reason for the high costs among deceased COMPASS participants is that roughly two thirds received aggressive care—defined as an in-hospital death or any of the following during their last month of life: use of an anti-cancer treatment (chemotherapy, radiotherapy, hormonal or targeted treatment), more than 14 days in the hospital, multiple ED visits or hospital admissions, or at least one intensive care unit admission.[11] A breakdown of each aggressive care indicator is provided in **Figure 1**.

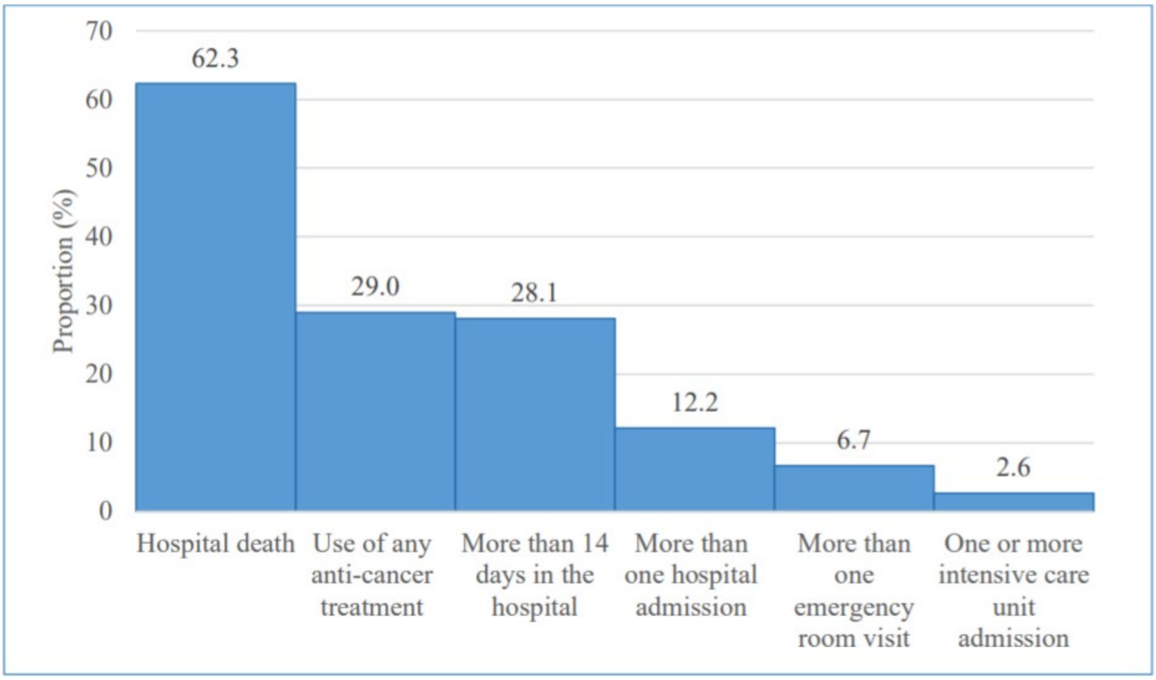

Figure 1. Indicators of aggressive care during last month of life (N=345)

How do COMPASS patients compare on these indicators to advanced cancer patients in other industrialized countries? The picture is mixed:

- Sixty-two percent of deceased COMPASS patients died in the hospital.[11] Estimates from Canada, the UK, Taiwan, and even the US where hospice is readily available and reimbursable by Medicare are 50 percent or less.[12-17] In France, the comparable estimate is 66 percent.[5]

- Twelve percent of deceased COMPASS patients had more than one hospital admission during their last month of life.[11] Roughly comparable estimates in the US, Canada, and Taiwan range from 10 to 23 percent.[16-20]
- Just under 3 percent of deceased COMPASS patients had one or more intensive care unit admissions during their last month of life.[11] Roughly comparable estimates are 2 percent in Canada,[16] 17 percent in France,[5] 17-19 percent in Taiwan,[17, 18] and 13-21 percent in the US.[13, 19-21]

In short, deceased COMPASS patients were more likely to die in a hospital than advanced cancer patients in most other developed countries but were less likely to have multiple hospitalizations and were much less likely to be admitted to an intensive care unit during their last month of life.

Evidence from the global literature suggests that palliative care may reduce both patient suffering and costs.

Palliative care provides symptom management and emotional, psychological and spiritual support to those with advanced, life-limiting illnesses. In Singapore, palliative care services are provided in acute care hospitals (both outpatient and inpatient care), community hospitals (inpatient care), and hospices (including inpatient, home and day care). Care is provided by multidisciplinary teams, mostly consisting of physicians, nurses, allied health workers, and trained volunteers.[22, 23]

COMPASS was not designed to assess the effectiveness of palliative care on patient suffering and costs. However, numerous studies from other countries, including at least one randomized controlled clinical trial,[24] have shown benefits of palliative care in reducing serious health-related suffering.[25, 26] Although evidence is mixed, several studies show that receiving palliative care may decrease end-of-life health care costs.[25, 26] Cost savings may accrue due to reduced number and duration of hospitalizations and reduced intensity of treatment,[27-29] including high-cost treatments that provide little or no clinical benefit.[30] One literature review concluded that in-home palliative care increases the chances of dying at home—which is much less expensive than an in-hospital death—by 10 percent.[25] A recent review of 43 studies concluded that home-based palliative care services “offer substantial savings to the health system, including a decrease in total healthcare costs, resource use and improvement in patient and caregivers’ outcomes.”[26] Yet, for several reasons, uptake of palliative care services in Singapore remains low.

Among patients in the COMPASS study, lack of awareness of palliative care is widespread.

Whether to receive palliative care is a decision best left to patients, their families, and their physicians. Of course, patients cannot request palliative care if they are unaware of it. Our research shows that only 46 percent of COMPASS patients were aware of palliative care upon enrolment.[31] Low awareness is not unique to Singapore. A national survey of family caregivers in the US reported that 55 percent had “never heard” of palliative care.[32] A review of studies from the US, Canada, Scotland, Italy, New Zealand, Ireland, the UK, Korea, and Sweden concluded that the general public has poor knowledge and awareness of palliative care.[33]

Seventy percent of COMPASS patients who died did not receive palliative care

Best practice is that palliative care be provided as early as possible in the course of any life-limiting illness.[34, 35] Advanced cancer is the archetypical example of a fatal illness. Yet only 30 percent of advanced cancer patients in the COMPASS study reported receiving palliative care.[36] Another recent study of patients who received treatment in National Cancer Centre Singapore reported that 48 percent of patients with advanced illness received palliative care.[37] This is lower than comparable estimates in other countries, including Austria and Brazil.[38, 39]

Common reasons for not receiving palliative care reported by COMPASS patients and their caregivers were that the patient was still receiving treatment and the belief that it is not time for palliative care. Some COMPASS participants also reported that either they or their physicians did not think that palliative care would help.[31]

Other barriers to palliative care access have been reported in the global literature. One major reason is physician hesitance, which has been attributed to lack of time to educate patients and their families due to clinical and administrative burdens,[40] lack of clear referral criteria regarding when to refer to palliative care,[41] knowledge and communication barriers,[42] and misaligned financial incentives.[43] A nationwide survey of physicians in Belgium found that specialist palliative care was not initiated in almost half of the patients for whom it could have been beneficial, most often because physicians felt that regular caregivers were adequately skilled in addressing palliative care needs.[44] This may or may not be the case in Singapore. Yet, some physicians in Singapore may be eager to refer but do not due to limited capacity in the local palliative care workforce, which is indeed highly constrained.

Singapore should take steps to increase awareness of palliative care, increase physician referrals to palliative care providers, and increase capacity to deliver palliative care.

Guidelines recommend making palliative care part of standard care for those likely to die within 12 months.[34] Our research shows that this objective has not been realized among advanced cancer patients in Singapore. This is despite evidence from the global literature which suggests that palliative care is one of the few health care interventions that may simultaneously improve health outcomes and reduce costs.[25, 26] Given this, efforts should be made to increase awareness of palliative services among Singaporeans.[45] Reimbursement policies should also be enacted to incentivize physician referrals to palliative services and to encourage patients to be able to die at home rather than in a hospital should that be their preference.

Capitation—a fixed amount of money per patient— is one such strategy that should be considered as it provides an incentive to reduce expenditures and right-site patients. Case-based reimbursement, such as payment based on diagnosis of a life limiting illness or similar criteria, offers similar and perhaps even greater incentives. Either strategy, if enacted with quality indicators to ensure patient's quality of life is not adversely affected, may have the intended effect of reducing costs without compromising patient care. Education and training of providers for when and how to refer patients to a specialist palliative care provider may also be necessary.[46] Research and demonstration projects in these areas will help determine the optimal approach. Yet, none of this will be possible without a trained palliative care workforce. For this reason, efforts should also be undertaken to expand the number of specialist palliative care providers and to train generalists in select palliative care services in efforts to reach more patients.[47]

Conclusion

The COMPASS study shows that most Singaporeans with advanced cancer receive costly, aggressive health services in the final months of life. The global literature suggests that palliative care may reduce such costs without compromising patient outcomes. Yet, less than half of advanced cancer patients in Singapore receive palliative care. Many of these patients are not even aware of palliative care. Singaporean policymakers should take steps to raise awareness of palliative care and establish policies to encourage greater uptake of palliative care services in efforts to improve care for patients with advanced illnesses.

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