

Resource allocation issues concerning early palliative care

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Background: The concept of early palliative care (ePC) has received enormous recognition in the field of cancer care. Increasing evidence supports this approach, but outside the research arena, the implementation of sustainable clinical concepts rely on solutions for practical problems such as funding issues. Therefore, the article presented here discusses economic considerations associated with different concepts of ePC.

Main points: The specialist approach: the most frequently cited ePC trials assessing examine the concurrent provision of specialist palliative care in addition to routine care. Most of this specialist palliative care has been provided by multiprofessional teams in an outpatient setting of tertiary care centers. A number of the research groups have also provided data about the resource utilizations of this approach. From this, a rough estimate of the cost of early specialist palliative care can be derived. Yet, in many parts of North-America, Europe and other regions, funding modes for such outpatient specialist palliative care is non-existent. Recent studies have pointed out that ePC for inpatients is associated with cost-savings. These cost savings are even more pronounced the earlier specialist palliative care is integrated in the care for the patients. Strengthening of general palliative care: most institutions recommend that palliative care as an approach should be strengthened as a part of standard care. To accomplish this, different measures such as teaching of general palliative care competencies of oncology teams, routine symptom assessment or the mandatory implementation of advanced care planning in care trajectories are being promoted. Due to the heterogeneity of these approaches, cost calculations are difficult, but can be weight against cost-saving estimated associated with for example less utilization of futile diagnostic and therapeutic procedures.

Conclusions: Researchers, health care providers and policy makers need to distinguish the different concepts behind ePC before providing cost estimates. Detailed information is provided in this article. From our view, it is evident that neither of the two approaches (general *vs.* specialist) can be a one-or-the-other choice. Successful ePC will most likely rely on a joint effort of all medical disciplines and profession in close cooperation and early integration of specialist PC services. For such an approach, additional resources may be necessary, but from the public health perspective, cost-savings can also be assumed.

Keywords: Cancer pain; non-opioids; pain management; palliative care; guideline; systematic review

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Introduction

Health care institutions and major stakeholders pointed out years ago, that palliative care is an inevitable part of the care for patients with life-threatening diseases and applicable early in the course of the disease together with

life-prolonging and disease modifying therapies (1). Yet, palliative care has been misperceived as end-of-life care by many cancer specialists. Many have been rather reluctant to deliver basic palliative care interventions as for example the assessment and management of patients' psychosocial needs. Few have received specialist training for symptom

control such as pain management (2). At the same time, routine integration of specialist palliative care services still is the exception and not the rule (3).

After a number of studies demonstrated the beneficial effect of early palliative care (ePC) for patients and caregivers, medical association such as the American Society of Clinical Oncology (ASCO) have addressed the relevance of the topic and published recommendations for ePC (4). Meanwhile, the concept has mean emerged as one of the most intensely discussed topics in cancer care.

Despite widespread enthusiasm, there is also significant skepticism among cancer specialists (5,6). While many cancer specialists feel uncomfortable with palliative care issues, others are strongly committed to care for the whole range of their patients' palliative care needs themselves and hesitate to share this assignment with specialist services (7). Both attitudes lead to a persisting underutilization of ePC programs, even if they are readily available (3). Moreover, another interpretation of ePC stresses the importance of strengthening the palliative care approach as part of routine care by, for example, increasing general palliative care competencies of cancer specialists and their teams or implementing advance-care-planning standards. With a look at poorer regions of the world it can even be argued that in many parts of the world, palliative care is (almost) the only available medical support and here, this should be initiated quite earlier than it is the case so. On the other hand it could well be argued, that implementation of palliative care services as a consequence of missing curative treatment opportunities is the wrong attitude and beside the point: effort should be equally put into the improvement of disease specific treatment modalities. Calling the access to palliative care a human right [European Association for Palliative Care (EAPC)] does miss the point when after all no cancer treatment is available at all. Should it then be called medical treatment including palliative care and anti cancer treatment is a human right.

Due to the heterogeneity of ePC concepts, a detailed look at the associated cost-utilization issues is warranted. Therefore, the article presented here discusses economic considerations associated with different concepts of ePC.

Different concepts of early palliative care (ePC)

The specialist approach

Palliative care, a medical field that has been practiced by different disciplines for centuries, has meanwhile been

formally acknowledged as a specialty in the US by the American Board of Medical Specialties and in many other countries around the world (8). The demand for palliative care specialists is increasing, since timely palliative care consultations have been shown to be beneficial for many patients in terms of reducing suffering, improving quality of care and communication (8). Since the landmark study of Temel *et al.* (9) "early palliative care", is very used as a synonym of "early and routine integration of multiprofessional specialist palliative care services". In fact, in trials assessing the effect of such early specialist palliative care, the specialist services are most often implemented in an outpatient setting (9). For example, a current cluster-randomized controlled trial (RCT) from Zimmermann *et al.* (10) examined the effect of ePC in outpatient clinics of the Princess Margaret Cancer Center Toronto. Here, the core intervention was a visit and follow-up in the outpatient clinic by a specialist palliative care physician and nurse, consisting of: comprehensive, multidisciplinary assessment of symptoms, psychological distress, social support and home services, routine telephone follow up 1 week after the initial visit (and thereafter as needed) monthly outpatient palliative care follow-up visits and an around the clock on-call service for telephone consultations in urgent issues (10). This is comparable to the intervention of Temel *et al.* (9) who did not provide telephone support but scheduled regular outpatient follow-up on a monthly basis.

Other groups that report retrospective results from the non-randomized non-controlled implementation of an ePC services into clinical routine of a large comprehensive cancer center in Germany (11). These authors also convey an understanding of ePC as "early and routine integration of a multiprofessional specialist palliative care service" but their service is available for in- and out-patients. Across the different studies, resource utilization is quite similar. In 2013, Dev *et al.* (12) report data from the practice of the "Palliative Medicine Service" Department of Palliative Care and Rehabilitation Medicine of the MD Anderson. Annually [2010] the team performs 608 new outpatient consultations and 3,663 follow-up appointments, and 1,880 consultations and 8,372 follow-up visits in the inpatient setting. Here, the routine integration of the palliative care team is not the rule (13). Rather, patients are symptomatic and likely to encounter complex psychosocial and spiritual problems. This may account for the relatively high number of follow ups (outpatients: five) compared to the work of Temel *et al.* (9) who reported an average of four follow up visits in the ePC group. Both groups (9,13) and also the group

of Zimmermann *et al.* (10) report the average time needed for each patient consultation. This averaged around 1 hour (Temel: 55 min, Hui: 45-90 min, Zimmermann: 60-90 min). All these specialist palliative care teams consist of physician and non-physician team members. The team from MD Anderson reports that palliative care physicians manage an average of 6.2 patient encounters per working day either independently or co-managed by other professions (13). The team consists of a 2:1 ratio of physician “full time equivalents” (FTEs) to mid-level-providers in 2010, but other services are built upon a 1:2 ratio (14) and others report a steadily increasing role for non-physician staff in specialist palliative care teams (15).

Many authors have argued that universally available early specialist palliative care is not feasible (8). Yet, for the hypothetical case, that a universal, nationwide “routine early specialist palliative care program” for patients with solid tumors would be implemented a rough financial estimate for this scenario could be based on the numbers provided above.

For each patient dying from solid cancer, a total of five palliative care team visits (60 min each) could be assumed, at least six patient encounters per working day are feasible on around 190 standard working days (12). The teams could consist of physician- and non-physician staff in a 1:1 ratio. Though it is evident, that many follow ups are managed independently by non-physician staff and that many services (e.g., Princess Margeret Cancer Center Toronto) (10) heavily depend on telephone-follow ups, we assume that all visits were performed as joint consultations of both a physician and a non-physician. Together this would result in no more than one physician and one non-physician FTE per 230 patients enrolled in a “routine integration of early specialist palliative care program”. Without controlling for additional costs for other resources (office, communication etc.), in the German health system, this would result in additional 500 Euro (\$535) needed per patient enrolled. Compared to the current cost of medical care for cancer patients in the last year of life the cost of such “luxury palliative care” would be surprisingly low. It would be far lower if universally available high-quality general palliative care, provided by the primary responsible cancer specialists and general physicians could be assumed and the the integration of specialist palliative care would only be triggered by “red flags” such as persisting suffering identified in routine distress screening as it is mandatory in some regions of the world (16).

It is evident that currently such universally available early

specialist palliative care is not feasible in most countries of the world, especially in poor resource settings, but also with specific health care systems settings. For example, in the US, unless a patient is admitted to a hospice program (as such late in the disease), palliative care teams rely on revenues from a billing system that does not account for the psychosocial needs of the patients and the complexity of multiprofessional care that is needed (17). Rather, medicine based on “interventions” (in a biomedical and technical sense) is favoured by the reimbursement rules (17). The same accounts for other countries. For example, in Germany, besides specialist palliative HOME care, not outpatient palliative care services can be reimbursed and especially non-physician workforce is not favoured by the system.

In comparison to these services data on the overall expenses for cancer treatment suggest that 126 billion were spent within the EU in 2009 (18). There was a wide variety of associated costs, health care covering for €51 billion (40%). Although there was no specification on the palliative care expenses, it is obvious that only a little proportion of expenses is directed to specialist palliative care and the resources needed for early (specialist) palliative care (see above) would be comparatively marginal. Moreover, for long, cost-reducing effects of palliative care have been assumed for in- and out-patient settings (8,19). Recent studies have pointed out that especially for inpatients with advanced cancer ePC is associated with cost-savings for the hospitals (20). These cost savings are even more pronounced the earlier specialist palliative care is integrated in the care for the patients (20). Specifically, in the current study of May *et al.* (20) palliative care consultation during hospital admission was associated with cost reductions of 14 % (late) to 24% (early consultation).

Main reasons for this effect might be the reduction of futile treatment and a more patient-centred and less aggressive care due to careful communication of treatment goals (19,21).

Strengthening of general palliative care

Currently, in most documents, a two-level approach of palliative care can be found; that is, the differentiation between a palliative care approach and specialist palliative care. The palliative care approach would be used in settings and services only occasionally treating palliative care patients. In contrast, specialist palliative care applies to a team of appropriately trained physicians, nurses, social

workers, chaplains and others whose expertise is required to optimize quality of life for those with a life-threatening or debilitating chronic illness. Specialist palliative care requires a multiprofessional team with appropriately trained physicians, nurses, social worker, spiritual caregivers and access to other healthcare professionals such as physiotherapists or pharmacists. Implementation of such specialist teams is expensive, and thus not available in resource-poor settings. The World Health Organization has recommended a public health approach for palliative care, utilizing general palliative care that is delivered by primary health care workers, who should be trained and counselled by palliative care specialists (22,23). Using this public health approach palliative care can be strengthened as a part of standard care. The public health approach requires a range of different implementation measures, such as teaching of palliative care competencies to general practitioners or community nurses (as well as to oncologists or geriatricians where available), routine screening of symptom burden or mandatory implementation of advanced care planning in care trajectories. Demonstration projects for this approach have been reported from African or Asian countries. A field study using rapid appraisal methodology has reported the beneficial effects of palliative care in Kenya, Uganda and Malawi (24). In Uganda, palliative care delivery improved significantly after the government expanded a law allowing midwives to prescribe pethidine so that registered nurses and clinical offices with a 9-month special training in palliative care can prescribe morphine in 2004 (25).

Mwangi-Powell *et al.* have described the different models of palliative care in Sub-Saharan Africa (26). In addition to the community-based home care model they described an integrated community-based home care model, where trained volunteers are used to identify patients requiring palliative care. The volunteers are supported by a qualified health worker who in turn is supported by a specialist team. The authors also describe hospital-based palliative care as a third organisational model, and report a serious lack of such services in the hospitals in the region. There is no specific discussion on early integration in these settings, though there is an ongoing struggle to reach patients earlier in the disease trajectory, as most patients would present themselves to the palliative care service only very late with far advanced disease, after prolonged treatment with traditional medicine or inadequate medical interventions. Especially the use of volunteers to identify patients in the community that would benefit from palliative care has been effective for early

integration of palliative care.

Due to the heterogeneity of these approaches, cost calculations are difficult. Costs are required for training of primary health care providers, information material and communication. In many African countries for example, mobile phones are universally available for communication, but airtime is expensive, and palliative care services have to provide resources so that they can call the patients or their caregivers as well as the primary health care providers for counselling. Using volunteers as community health care workers can save costs, but training of volunteers still requires time and money (27). These costs can be weighted to some degree against the savings associated with less utilization of futile diagnostic and therapeutic procedures. However, savings to the health care systems will be marginal in developing countries, though savings will be significant for patients and families who will not spend a large part of the family resources for futile treatments. From a political point of view, political support is growing to consider palliative care in the health care budgets, as evidenced by a resolution of the African ministers of health in 2013 (28).

In developed countries, early integration of general palliative care would be beneficial as well. General palliative care should be delivered by general practitioners or nursing home staff, but also by oncologists and geriatricians. Training these target groups would require significant resources. But as no common understanding exists to which level palliative care is regarded a general or specialist skill, these resources cannot be defined in detail.

Work time allocation would be required for the provision of palliative care in daily clinical work, and this would need additional staff in hospitals, nursing homes and general practice. Again, no estimates are available how much resources would be required and which resources would be required for specific implementation of early general palliative care. Some implementation measures could be very cost-effective, for example, the introduction of a simple screening for symptom burden in patients with cancer (or better still in all patients admitted to hospital), using a simple instrument such as the Edmonton Symptom Assessment Score (ESAS) or the Palliative Outcome Score (POS) as part of the admission procedure. Similarly, the introduction of clinical pathways, or the documentation of individual treatment goals may be simple and cost-effective measures for the implementation of early general palliative care.

Part of the costs for the implementation might be

balanced by cost reductions with the reduction of futile interventions. Training of nursing home staff might reduce the number of hospital admissions in patients with advanced disease significantly, leading to significant cost savings.

Conclusions

Researchers, health care providers and policy makers need to distinguish the different concepts behind ePC before providing cost estimates. From our view, it is evident that neither of the two approaches (general *vs.* specialist) can be a one-or-the-other choice. Successful ePC will most likely rely on a joint effort of all medical disciplines and profession in close cooperation and early integration of specialist PC services. For such an approach, additional resources may be necessary, but from the public health perspective, cost-savings can also be assumed.

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Footnote

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