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Palliative care research – priorities and the way forward

Stein Kaasa[a,b,*], *Lukas Radbruch*[c]

[a] *Department of Cancer Research and Molecular Medicine, Faculty of Medicine, Trondheim, Norway*
[b] *Palliative Medicine Unit, Department of Oncology, St. Olavs University Hospital, Trondheim, Norway*
[c] *Klinik für Palliativmedizin, RWTH Aachen University, Germany*

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ABSTRACT

Palliative care is developed primarily outside academic institutions and with a primary focus upon service development. Initiatives to formalise the research structure were taken in Europe in 1996 by the European Association for Palliative Care (EAPC) through the establishment of the EAPC research network, and in 1998 in United Kingdom through the establishment of a palliative care research society.

Most studies conducted in cancer palliative care up to now have been small and descriptive without the necessary quality to give input into evidence based medicine.

The study population is described and defined differently between studies and there is no consensus on how to measure the most important outcomes, such as symptoms including pain, fatigue and depression in palliative care research.

During the last decade, large research groups have been established in some countries – partly based upon national and international grants. In order to improve palliative care research nationally and internationally, these few groups of sufficient size and of sufficient output need to be given the responsibility and incentives to perform collaborative research nationally and internationally. It is necessary to train a sufficient number of clinician scientists within palliative care research and to give these scientists the possibility of permanent research posts in particular combined clinical and research posts after the research training period. National and international funding needs to continue and successful collaboratives need to receive predictable, sustainable funding. Since the majority of palliative care patients come from oncology, it is important to establish a close collaboration between these two disciplines.

1. Introduction

The development of palliative care in most countries between 1960 and 1970 happened outside the main stream health care system and outside academic institutions. This was despite the fact that several of the ‘founders’ of the modern palliative care movement such as Cicely Saunders, Geoffrey Hanks and Robert Twycross in United Kingdom, Vittoria Ventafridda in Italy and Kathy Foley in United States were employed in academic institutions and also themselves conducted high quality research. The strongest driving force during the time period in general was the development of clinical programmes, strongly linked to home care, hospices, nursing homes and multidisciplinary teams and a few of these programmes had a formal attachment to academic institutions.

It was not until the 1990s that research societies and organisations were formalised in Europe through the establishment of the Palliative Care Research Society in the UK in

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[*] *Corresponding author:* Address: Palliative Medicine Unit, Department of Oncology, St. Olavs University Hospital, Trondheim, Norway. Tel.: +47 73 867 251; fax: +47 73 867 289.
E-mail address: stein.kaasa@ntnu.no (S. Kaasa).

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1991 and it did not become a membership organisation until 1998.[1] The EAPC established a research network (EAPC RN) in 1996.[2] At that time, it was decided to focus primarily on the development of clinical guidelines and later to organise research meetings and conferences.

2. Limitations, challenges and opportunities

During the last decade, limitations and challenges in palliative care research have been addressed by several organisations, National Research Institutions (in the UK and Canada) and at meetings and congresses.

The EAPC conference has become an important meeting place for all researchers worldwide in palliative care. The number of poster and oral presentations increased from 200 in the year 2000 to 480 in 2006. For the 2008 conference in Trondheim 538 abstracts were submitted. Palliative care sessions have also been introduced at the main oncology meetings in Europe (ESMO and ECCO) and USA (ASCO).

Clinical practice in cancer palliative care is largely based upon clinical experience and not evidence based.[3] Most studies are small, of descriptive nature and reliable, valid and internationally endorsed outcomes are not used.[4] Reports evaluating and drafting the strategy for palliative care research have identified a wide range of areas of health care as of importance. These range from end of life care, unmet needs, social diversity, symptom assessment, bereavement, care giver burden, education, communication, ethics, symptom management and pathophysiology of the dying, to complementary and alternative approaches.[5–7] Consequently, several different disciplines are involved in palliative research such as psychology, psychiatry, palliative medicine, nursing, general practice, social science, basic science/molecular biology and health service research, amongst others.

It is acknowledged in most of these reports that there is a need for national and international fora for palliative care research and collaboration amongst groups, nations and research disciplines. Academic, robust, long-lasting affiliations are needed that can be the basis of an establishment for the research group of sufficient size and endurance. The study population needs to be defined according to similar (identical) indicators and the populations included in the studies need to be a representative of the population found in clinical practice.

There is a need to develop outcome measures that are patient centred, valid and reliable which can be applied in both complex and more ‘simple’ intervention studies. Finally, prospective intervention studies need to be planned rigorously by multidisciplinary teams, sufficiently sampled and when appropriate conducted in international settings.

3. Research initiatives

Several initiatives have emerged in Europe and North America during the last 5–6 years. In 2004, 16.5 million Canadian dollars were allocated to a palliative end of life care initiative through the Canadian Institute of Health Research (CIHR).[8]

The most substantial part of the money was allocated to the New Emerging Team (NET) grants[9] with the aim of building research capacity and creating interdisciplinary research. The content (fields) of research covered within these NET grants includes a wide range of topics from symptom control, communication, care giver research, end of life care, symptom assessment and classification, amongst several other topics.

The National Palliative Care Research Center (NPCRC) was established in the US in 2005 with the aim of promoting palliative care research[10] by providing mechanisms to develop a platform for a new generation of researchers in palliative care and coordinate and support studies. Recently, the NPCRC have announced funding opportunities targeting several areas, including pilot and exploratory projects, junior researcher support, infrastructure and support for study design and statistics.

In 2006, during the EU sixth framework, a call for research in cancer palliative care was announced under the heading Combating Cancer – Specific Targeted Research or Innovation Projects. The European Palliative Care Research Collaborative (EPCRC) was successfully funded for a period of three years (Table 1).[11] The collaborative constitutes members from eight different countries and institutions. The aims of the EPCRC are to develop novel genetic methods for the prediction of opioid responses and individual variation in cachexia, in addition to developing consensus and evidence-based methodology for assessment and classification of pain, cachexia and depression into an internet system for implementation of European evidence based guidelines which will combine the new knowledge of symptoms, genomics, assessment and classification. Finally, the EPCRC also aims to establish a long-lasting European collaborative in palliative care cancer research in close collaboration with the EAPC RN.

In 2007, a palliative care project was funded by the European Commission’s Executive Agency for the Public Health Programme (PHEA) under the funding scheme Health Information: developing mechanisms for reporting and the analysis of health issues and producing public health reports. The project will describe the best practices in palliative care and models in the participating countries with a focus on the actual point in the course of the illness at which palliative care is typically offered or initiated, the adoption of an integrated approach and whether or not a distinction is made between basic and specialist palliative care.

In 2008, two projects were funded also from EU’s seventh framework under the funding scheme Coordination and Support Action: Optimizing Research in End of Life Care of Cancer Patients (see Table 1).

The first project in the seventh framework, priorities for research and measurement in end of life care (PRISMA) was found with the overall aim of informing best practice and harmonising research in end of life care for cancer patients across Europe to compare and exchange approaches and experiences in measuring research priorities.

The second project, OPCARE aims to consolidate and further develop the established international collaboration that has evolved around a specific programme to improve care in the last days of life, the Liverpool Care Pathway of the Dying (LCP).

The EAPC RN has recently published the results from a cross-sectional survey.[12] This study included 21 countries

Table 1 – Research initiatives in the new millennium on national or international levels

Country	Year	Total amount	Type of funding and project
Canada	2004	16.5 million Canadian dollars	Career transition awards Pilot project grants New emerging team grants
USA	2005		National Palliative Care Research Centre A centre to promote palliative care research
Europe	2006	1.8 million Euro	EU sixth framework – combating cancer European Palliative Care Research Collaborative (EPCRC)
Europe	2007	1.3 million Euro	EU PHEA – health information Describing best practices in palliative care in Europe
Europe	2008	1.6 million Euro	Coordination and supportive actions: Reflecting the positive diversity of European priorities for research and measurement in end of life care (PRISMA)
Europe	2008	2.3 million Euro	EU seventh framework – coordination and support actions (coordinating) – optimizing research on end-of-life care in cancer patients: A European collaboration to optimise research and clinical care for cancer patients in the last days of life Optimizing Cancer Patient Care through the Advancement of Research and Education (OPCARE)

with a total of 3030 patients. One major conclusion in addition to the clinical findings was that the level of interest allowed very low budget multicentre palliative care research across Europe. This study was followed by the ongoing European pharmacogenetic opioid study (EPOS) with the principle objective of examining clinical symptoms along with pharmacogenetic and opioid pharmacology data.[13] The aim is to include 2500 patients in this study, with clinical, pharmacological and genetic data.

Several national strategic analyses of palliative care research, as well as papers recently published in the international literature, have pointed to the need to improve the quality and the quantity of palliative care research. The key elements in these papers seem to be similar: the need to fund and establish multidisciplinary research groups of sufficient strength and to decide about common subjective outcomes in order to be in the position to compare data between studies and to perform meta-analyses. The improved outcomes need to be developed with optimal validity and reliability. One may agree from a clinical point of view that the clinical validity should not be underestimated, meaning that there is a need to focus on the clinical content, the sensitivity to detect differences between groups and over time (for prospective studies). These ‘new’ methods need also to be applicable in research as well as in daily clinical practice.

The work force in cancer palliative care research needs to be adequately trained and a number of post-doctoral and combined clinical/research positions have to be established. Furthermore, it has also been pointed out that there is a lack of academic positions in palliative medicine in most European countries. One consequence of these limitations is that many of the research groups are small and lack the resources to sustain long term planning. In consequence these groups often are not sustainable.

In several of the strategy plans, it has been endorsed that palliative research (in general) needs to cover the patient cohort from early in the disease trajectory to end of life (terminal) care, with emphasis on symptoms and treatment, psychological needs of the patient as well as social and spiritual aspects. Such a broad emphasis is a significant challenge and especially for a field of research such as cancer palliative care that is in its infancy.

Most of the research conducted in palliative care includes cancer patients and most research positions are linked to cancer clinics and oncology academic institutions. However, palliative care is also established in other fields of medicine or closely linked to other disciplines such as geriatrics, neurology, internal medicine, paediatrics and even intensive care.

Looking at the clinical needs in many developing countries where many patients are dying from HIV/AIDS, different priorities emerge and in these areas appropriate research agendas have to be developed.

The need for collaboration between oncology and cancer palliative care has been further emphasised in the latest WHO definition of palliative care which states that the continuum of care is needed for all patients with life threatening illness to prevent and relieve symptoms and suffering.[14] The need for research as a basic prerequisite for the continuing evolution of palliative care has been confirmed by the EAPC and other palliative care associations throughout the world in the Venice Declaration. This declaration states that palliative care research is not only necessary in developed countries, but also needs to be implemented in developing countries. The declaration suggests that specific research agendas are set up on local, national and international levels.[15]

The Venice Declaration, and the need for high quality palliative care research, has been supported again with the Budapest Commitments, a recent initiative from EAPC and other palliative care associations, listing research as one of the five target areas for improvement of palliative care.[16]

4. The ongoing initiative internationally in the new millennium

In the UK and Canada national programmes within palliative care research have funded the establishment of long-lasting multidisciplinary research groups with quite different agendas between groups covering many aspects of palliative care research. The leaders of the two UK funded projects have in a recent paper discussed whether the initial visions will be achieved and it is acknowledged that the structure is fragile and relies on goodwill from individual initiatives to continue meaningful collaboration.[17]

The EPCRC has passed the first year of its three year grant. In a recent publication, a detailed strategy on symptom assessment has been outlined, with the need for international collaboration underlined as well as the need to focus clinically on the development process of assessment and classification tools with major involvement both from patients and from health care providers.[18] The need to improve and standardise patient reported outcomes has also been acknowledged by the National Cancer Institute (NIH, USA).[19] The NIH has funded a patient reported outcome measurement system (PROMISE) network with a goal of developing a widely available set of standardised instruments to measure subjective outcomes in many chronic illnesses.[20,21]

5. The way forward – palliative medicine agenda

Most of the research in palliative care in Europe is conducted and published within the field of oncology. In order to strengthen palliative care research for the next decade, we propose basing further development upon existing groups of sufficient size (nationally), who publish and who have shown the ability to collaborate nationally and/or internationally. In order to successfully develop a strategy for the general advancement of palliative care research at the European and worldwide level, these groups need to be given incentives which promote external collaboration, which may also lead to new groups of sufficient size with a sustainable agenda. In addition, however, we need a system which allows smaller centres to collaborate with the larger groups, nationally as well as internationally. Palliative care centres with one clinical researcher and a PhD student can be easily incorporated into research groups as well as national and international networks.

Table 2 – Main areas of focus

- National and regional research agenda with specific priorities
- National and international collaboration
- Development/agreement about outcomes
  - – Patient centred
  - – Independent from setting
- Development/agreement about patient cohort classification
- Type of studies
  - – Move from descriptive to (experimental) intervention studies
  - – Sufficiently sampled
- Research in team – multidisciplinary and multi professional
  - – Long-lasting of sufficient size
  - – Translational with input from basic scientists

The field of oncology is under steady development with improved survival at cohort levels due to early detection of disease, as well as improved treatment. Many patients are living longer with incurable metastatic disease, receiving various types of chemotherapy including targeted therapies. Many of these patients will be in need of symptomatic treatment and psychosocial support for a long time during life-prolonging and symptom preventive as well as symptomatic tumour targeted treatments. There is a great potential to develop a palliative focused research agenda within these patient cohorts. For example in conducting cost–benefit analysis for new treatments, there is an urgent need to develop methods which combine outcome with survival, symptom prevention and symptom relief and the overall quality of life. Staging of patient cohorts in most oncological studies is based upon tumour burden whilst many patients are also suffering from symptoms due to their advanced disease. A combined staging system incorporating both tumour burden and subjective symptoms and signs seems an appropriate collaborative initiative between palliative care and oncology researchers (Table 2).

Initiatives have been taken by national research councils in the UK and Canada to establish national collaborations and within the EU sixth and seventh frameworks to establish international networks. These funds are time limited and should be evaluated. The successful groups and networks need to receive robust long-term funding after the initial periods. Furthermore, a robust academic infrastructure needs to be developed with senior research staff at academic institutions and universities. Chairs of palliative medicine have to be established at the main medical schools in combination with some core funding for research assistants in order to be able to conduct clinical research.

Through new methodology in molecular biology, major achievements have been seen in the understanding, the treatment and classification of cancer. Some groups have also seen this translational potential for the understanding of symptoms, such as pain and cachexia.

A few palliative care centres have achieved a critical mass in their research groups. These groups benefit from multiprofessional collaborations of researchers with competence in clinical medicine, sociology, psychology, ethics and epidemiology amongst others. This mixture of competencies enables the team to address complex research questions within the area of cancer palliative care.

A change from small, hypothesis-generating studies of non-experimental design into prospective, multicentre intervention studies of appropriate sample size, has been called for. The EAPC RN concluded at the time of establishment in 1996 that it was premature to establish a network to conduct multicentre and international studies. However, recently such studies have been conducted by members of the network. Furthermore, several of its members are key scientists within several of the UK national collaboratives as well as in the EPCRC.

As EAPC RN pointed out 10 years ago, prospective intervention studies need major networks with sufficient funding and structure. Such studies can be conducted as large, national and/or international collaborations. The EAPC RN and its members have proven their ability to conduct non-experimental multicentre studies[12] as well as collaborative research between clinicians and basic scientists (molecular biologists).[22] The EAPC RN has recently started the process of developing a new research agenda for the next decade with the aim of mobilising the necessary resources to conduct prospective, international, multicentered studies.

6. Conclusion

In order to improve palliative care research nationally and internationally, the following are required:

- Common indicators for the classification and assessment of subjective outcomes (symptoms and the quality of life).
- Groups of sufficient size and of sufficient output need to take the responsibility for the development of research into the next decade and such groups need to be given incentives to take on these tasks.
- Development needs to be fertilised in an open structure and the EAPC RN will take this initiative and seek collaboration with other national and international organisations in palliative care, as well as in oncology, pain, epidemiology and others that are relevant.
- National and international (EU) funding needs to continue and the successful collaboratives need to receive further funding without unnecessary gaps since the structures are still fragile, with a limited number of people and researchers in palliative care.
- It is necessary to train a sufficient number of clinician scientists and scientists in palliative care research. Permanent research posts or combined clinical and research posts after doctorate and post doc periods should be available for such scientists.
- International networks of palliative care research such as the EAPC RN need to be funded in order to build a long-term structure.
- At the national level, earmarked funding, as in the British and Canadian research programmes, needs to be allocated to palliative care research, preferably with incentives for national and international collaboration.

Conflict of interest statement

None declared.

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