

Chair ICO/UVIC-UCC of palliative care at the University of Vic – Central University of Catalonia: an innovative multidisciplinary model of education, research and knowledge transfer

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ABSTRACT

Objectives Generation and dissemination of knowledge is a relevant challenge of palliative care (PC). The Chair Catalan Institute of Oncology (ICO)/University of Vic (UVIC) of Palliative Care (CPC) was founded in 2012, as a joint project of the ICO and the University of Vic/Central of Catalonia to promote the development of PC with public health and community-oriented vision and academic perspectives. The initiative brought together professionals from a wide range of disciplines (PC, geriatrics, oncology, primary care and policy) and became the first chair of PC in Spain. We describe the experience of the CPC at its fifth year of implementation.

Methods Data collection from annual reports, publications, training and research activities.

Results Results for period 2012–2017 are classified into three main blocks: (1) Programme: (a) The advanced chronic care model (Palliative needs (NECPAL)); (b) the psychosocial and spiritual domains of care (Psychosocial needs (PSICPAL)); (c) advance care planning and shared decision making (Advance care planning (PDAPAL)); and (d) the compassionate communities projects (Society involvement (SOCPAL)). (2) Education and training activities: (a) The master of PC, 13 editions and 550 professionals trained; (b) postgraduate course on psychosocial care, 4 editions and 140 professionals trained; and (c) workshops on specific topics, pregraduate training and online activities with a remarkable impact on the Spanish-speaking community. (3) Knowledge-transfer activities and research

projects: (a) Development of 20 PhDs projects; and (b) 59 articles and 6 books published.

Conclusion Being the first initiative of chair in PC in Spain, the CPC has provided a framework of multidisciplinary areas that have generated innovative experiences and projects in PC.

INTRODUCTION

Training and education in palliative care (PC) is essential in the development of quality PC provision and major points of a Palliative Care Public Health Programme.¹ In 1992, the PC service at the Catalan Institute of Oncology (ICO) in Barcelona—a monographic cancer institute—developed its own training strategy, implementing basic and intermediate levels, and the first master's degree in PC started in 1997, jointly with the University of Barcelona.

Additionally, due to the experience acquired in the implementation of the Catalonia WHO Demonstration Project for Palliative Care and its international impact, there were increasing demands for support for the design, implementation and evaluation of PC services and programme in Spain, Europe and Latin America.² These policy activities, establishing contracts and agreements with public or private organisations, had the support, as main partner, of the Catalan Department of Health.

In 2007, the Qualy Observatory was created at the ICO, as the think-tank branch of the PC clinical activities, oriented to give support to the quality improvement and developing programme and services and to add value to the existing clinical educational activities (basic, intermediate and master PC courses).

In 2008, this department was designated as WHO Collaborating Centre (WHOCC-ICO), and the vision was expanded to the development of PC approach and chronic care policies.³ In this sense, the opening perspectives of the evolution of the Catalan PC policies towards advanced chronic care, the early identification of patients in need of PC, the inclusion of patients with different advanced chronic conditions, the community perspectives and the social issues have been focal points of the WHOCC-ICO.²

Another opportunity for development was the creation of the programme for the comprehensive care of people with advanced chronic conditions, supported by ‘la Caixa’ Foundation, which has implemented a wide range of psychosocial services in Spain, and required an intensive emphasis of education, training and research on psychosocial and spiritual care for people with advanced chronic conditions.⁴

These changing scenarios of needs and demands required to open the perspective to the community and other disciplines beyond cancer and to implement an academic position with different partnerships. This was the origin of the Chair of PC University of Vic – Central University of Catalonia (UVic-UCC)/ICO. This paper describes the main characteristics and activities of the Chair of PC at the UVic-UCC for the period 2012–2017.

Chairs at the UVic-UCC are conceived to develop projects on education and research in a specific topic or area. They are defined as academic units that allow collaboration between the university and other organisations, either public or private, to generate scientific knowledge and transfer it to society. The Chair of PC UVic-UCC/ICO was built with a formal agreement between the ICO and the UVic-UCC in 2012. The model of organisation was based on the ‘spin-off’ concept: a flexible and innovative organisation with

clear aims and oriented to outcomes and partnerships. This new approach was meant to focus on promoting public health and community-oriented approach and to widen access to PC beyond cancer. Its mission, as shown in table 1, is to generate and spread knowledge on integral PC and transfer it to practice at the organisations that aim at improving quality. The chair develops aspects of conceptual and methodological innovation, through training and research activities. Our chair is made by a group of multidisciplinary professionals, led by a professor, from diverse allied institutions such as the ICO, the UVic-UCC, a sociohealth centre and a primary care team. All these professionals work jointly as a team in the project of the chair. Funding for the chair comes from diverse sources: the ICO and the UVic/UCC cover part of the staff, and multiple organisations, both public and private, provide contracts for either consultation or educational activities.

METHODS

We have retrieved data from yearly proceedings, minutes, surveys and annual reports for the period 2012–2017.

RESULTS

The main results of the activity developed by the chair of PC for period 2012–2017 have been classified into three main blocks:

1. Main results of areas of interests and programme.
2. Main results on education and training activities.
3. Main results on knowledge-transfer activities and research projects.

Key areas of work and programmes

The NECPAL programme for the comprehensive and integrated care of people with advanced chronic conditions

The NECPAL programme is the practical application of the comprehensive, timely and integrated PC of people with all types of chronic conditions with a community and population perspective. These changes of perspectives have been described as the conceptual transitions of PC in the 21st century.

Table 1 Principles, mission, vision and main characteristics of the chair of PC ICO/UVic-UCC

Principles	PC considered as a human right for all and an essential element of healthcare systems.
Mission	To promote PC development with public health (quality, equity and coverage), population (territories and all settings) and community (social and healthcare) perspectives.
Vision	Centre for knowledge with influence in decision making for policy makers and managers.
Characteristics	Innovation, flexibility, adaptation to needs and demands, and focus on outcomes. Combined education–implementation–research.
Inter and multidisciplinary approach	Respectful multidisciplinary partnership between: PC, oncology, geriatrics, primary care, policy and managerial disciplines. Respectful interdisciplinary partnership between professionals (doctors, nurses, psychologists, social workers, occupational therapists, physiotherapists, chaplains and so on).
Values	Oriented to improving care for the most vulnerable with the public health values (coverage, access, equity and quality). Compassion, humanism and respect.

PC, palliative care; UVic-UCC, University of Vic – Central University of Catalonia.

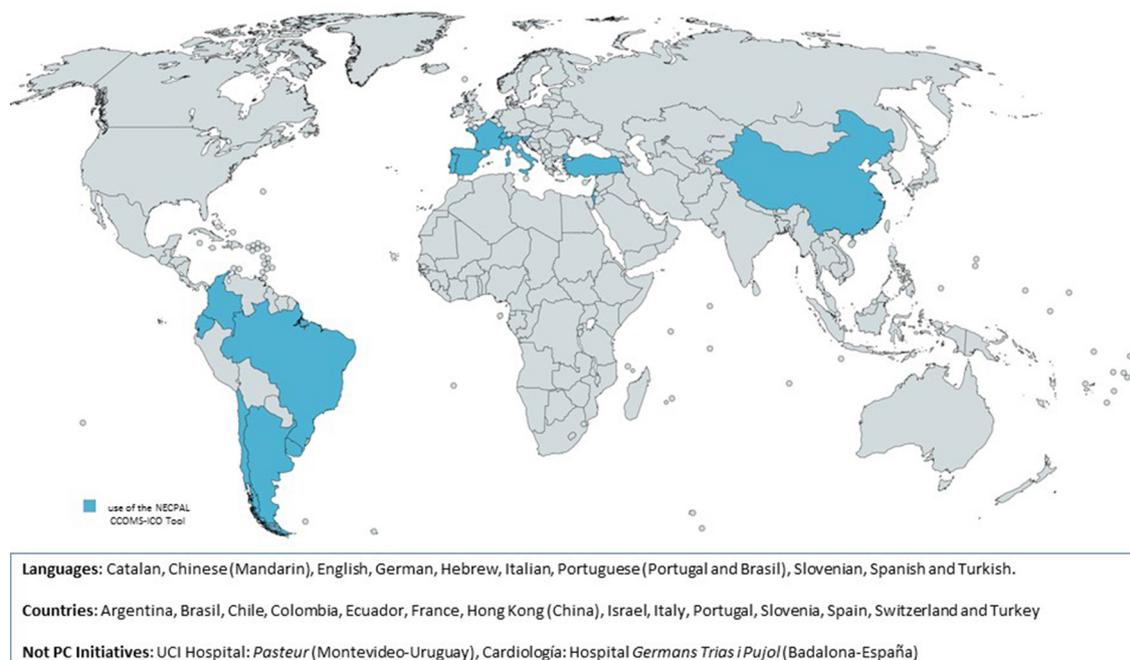


Figure 1 Worldwide use of the NECPAL CCOMS-ICO tool.

The programme started in 2010, and it has included a wide range of activities, combining the generation of knowledge, research and evaluation of the activities, the dissemination of this knowledge through policy design, education and training and the implementation of actions in the organisations to improve the quality of care. The target patients have been people with advanced chronic conditions, specially frailty, multimorbidity, dementia in the elderly and all types of organ failures.

The areas of focus have been sequentially: (1) the design and validation of the NECPAL CCOMS-ICO tool⁵; (2) the epidemiology (prevalence of patients with advanced chronic conditions in need of PC)⁶; (3) the clinical issues (characteristics, needs and effectiveness of interventions)^{7,8}; (4) the ethical issues and challenges of early identification⁹; (5) the model of person-centred care and the comprehensive care for patients and families; and (6) the model of integrated care of organisations to be adapted to the new conceptions and its insertion in public health policies.

Main results of the programme include the translation of the NECPAL tool into 10 different languages, as shown in [figure 1](#). Additionally, the number of prevalent patients identified in Catalonia in 2017 as ‘Advanced patients’ was 26 716 and 160 905 as ‘Complex chronic patients’ (source: Catalan Health System Observatory; http://observatorisalut.gencat.cat/en/central_de_resultats/index.html).

The PSICPAL programme: psychosocial and spiritual care of essential needs of patients and families

In order to address the psychosocial and spiritual needs of patients with advanced conditions, ‘la Caixa’

Banking Foundation (FBLC) established a programme in 2008 to create psychosocial care teams. Currently, there are 42 teams with 220 professionals (mainly psychologists and social workers) in Spain. The FBLC appointed the chair to lead the scientific direction of the programme, for design, implementation and evaluation including training of professionals. Our studies performed within this programme during the period 2010–2017 show evidence on the effectiveness of the specific and specialised psychosocial interventions to reduce levels of suffering and distress in PC patients and their families.^{4,10} Several tools to provide a systematic, holistic assessment of the psychosocial needs of end-of-life (EOL) patients have been created and validated under the auspices of this programme as well.¹¹

Additionally, we have developed conceptual and training proposal of the model of care centred in the so-called essential needs of patients (spirituality, dignity, autonomy, key relations and hope), focused on a model of professional competencies.¹²

The PDAPAL programme: promoting advance care planning (ACP) and shared decision making

The implementation of a comprehensive care model requires the full development of ACP. ACP has been identified as one of the main challenges for the implementation of the advanced chronic care model in Catalonia. To respond to this challenge, a comprehensive programme has been designed and implemented by the Department of Health (DoH) and led by the CPC.¹³ The programme started in 2013, and it includes the elaboration of a consensus policy document and educational activities including practical recommendations

Features

for the ACP process, an online course, workshops, massive open online courses (MOOCs) and research.

Additionally, we have developed research and training activities on the methodology and practice of shared decision making in the care of persons with advanced chronic conditions and frailty.¹⁴

The SOCPAL programme: involving society through compassionate/caring communities initiatives

From 2015 onwards, the chair has been actively involved in the programme ‘Vic, caring city’. This project as an expansion of a comprehensive and integrated system of PC has been jointly developed with the area of Social Welfare at the city council of Vic.

The main aims consisted in promoting changes in social and cultural attitudes towards the EOL and providing integrated care for people with advanced chronic conditions and social needs such as loneliness, poverty or low access to services at home among others. The selected slogan was ‘Living with meaning, dignity, and support the end of life’. The programme for the first year has included 19 activities (cultural, training, informative and mixed) and preliminary results at 1 year have been positive.¹⁵

The WHOCC Programme: developing International cooperation

The chair has disseminated knowledge in many countries, the most active have been Portugal, Italy, Switzerland, Argentina, Australia and several regions in Spain. One of the most recent milestones was the appointment of Dr Gómez-Batiste as medical officer for Palliative and Longterm Care at the WHO Headquarters in 2014 and Cristina Lasmarias as intern in 2015. Their main tasks had to do with the development of projects aimed at the strengthening of PC. As a result, a manual was published in collaboration with international experts in 2017. The book describes the essentials of PC and also the innovative strategies and actions to design and implement comprehensive programme and services integrated into health systems.¹⁶

Education and training activities

The Master ICO/UVic of PC

The Master has trained 550 professionals in 13 editions from 1998 to 2017. Students come from diverse healthcare disciplines including medicine, nursing, psychology and others. It has achieved high results on the satisfaction and impact in the implementation of PC services, and it has become a reference for the advanced level of training in Spain.¹⁷

Table 2 Main research projects of the Chair UVIC-ICO for the period 2012–2017

Area	Project title	Project aim	Achieved and/or expected results
Psychosocial care	Evidence of effectiveness of psychosocial interventions.	Evaluation of psychosocial support teams in Spain funding: ‘la Caixa’ Banking Foundation.	Evidence of effectiveness of psychosocial interventions. Two PhD projects (one finished).
Chronic PC	MACA Hospitals (Catalan network of hospitals).	Evaluate and improve quality of palliative approach in 15 hospitals.	Quantitative and qualitative evaluation done. Quality improvement plans for hospitals. One PhD project ongoing.
PC	PADES Catalonia	Evaluation and proposals of improvement for the home care support teams in Catalonia.	Proposals/projects of quality improvement of home care support teams. Quantitative and qualitative evaluation done. One PhD project ongoing.
Chronic PC	Nursing homes.	Improvement PC approach in nursing homes.	Proposals/projects of quality improvement plans for nursing homes. One PhD project ongoing.
Chronic PC	Chronic pain (prevalence and characteristics) in patients with advanced chronic conditions in the community. Primary care service in Vic (EAP VIC).	Evaluate the prevalence and characteristics of chronic pain.	Prevalence and characteristics of pain.
Chronic PC	Evaluation of the Catalan chronic care policy.	Evaluation of the first 4 years of implementation of the advanced patients’s care policy at the Ministry of Health. Funding: Catalan Ministry of Health.	Quantitative and qualitative evaluation done.
Advance care planning (ACP)	ACP implementation in primary care.	Effectiveness and feasibility of implementing ACP in a primary care setting. Funding: Catalan Ministry of Health.	One PhD project ongoing.
Chronic PC	Advance frailty and decision making. Geriatric and PC service/HUSC.	Validation of Frail-VIG index and the framework for end-of-life decision making. Funding: Research Institute Instituto Carlos III.	One PhD project finished.
International cooperation	Primary Care Reference Group de la EAPC: ‘Core competencies expected in General Practitioners, in order to enhance access to and delivery of palliative care in primary care’.	Nominal group technique to identify the competencies of general practitioners in Europe.	Organisation of the Catalan nominal group, elaboration of report with conclusions and list of identified competencies sent to the EAPC Taskforce.

EAPC, European Association for Palliative Care; HUSC, University Hospital of Santa Creu in Catalan; ICO, Catalan Institute of Oncology; MACA, Advanced Chronic Illness in Catalan; PADES, Home-support teams in Catalonia; PC, palliative care; UVIC, University of Vic.

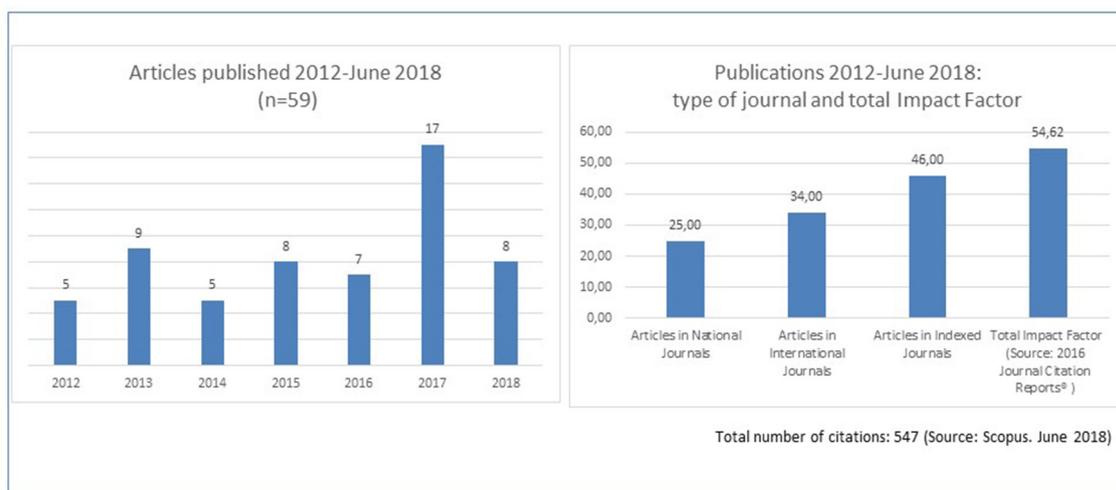


Figure 2 Articles published 2012–June 2018: publications per year, types of Journal, total impact factor and total number of citations.

After years of being focused in the care of patients with terminal cancer and devoted to train PC specialists, the master has changed its orientation in the last four editions towards the care of advanced chronic patients in the community, according to the development of new public health policy strategies in our context and the evidence of population PC needs. The attendants have diverse backgrounds such as primary care, geriatric services, internal medicine, oncology and nursing homes. The 14th edition of the Master started in October 2018 with new 46 students. Four members of the chair including a nurse and three physicians act as core coordinators of the project.

Postgraduate course on psychosocial and spiritual PC

This postgraduate course started in 2015 and was initially designed and implemented within the programme of la Caixa Foundation to train the psychologists and social workers of the programme. This postgraduate course has already completed four editions with a total number of 140 students, mainly psychologists and social workers, but also students from other healthcare disciplines, including nursing and medicine. The fifth edition of this postgraduate course starts in November 2018 with 21 new students. Three team members of the chair are involved in this project as coordinators, teachers and administrative support.

Pregraduate training, workshops and other courses

The chair is present at four different faculties providing pregraduate training. The recently (2017) created Faculty of Medicine at the University of Vic has prioritised the content of PC model of care in a mandatory topic in the second year called *Social medicine and communication skills*, and *Palliative Care* will be taught in the fourth year. Added to this, PC will be inserted as a topic in every specific organ issue (cardiology, pneumology, geriatrics and so on) as a transversal

issue. Four physicians from the chair will be involved as teachers. The new project is a great opportunity to develop a full PC undergraduate curriculum, following international criteria and adding experience to existing national and international initiatives.^{18 19} This aim is very common in PC settings in the Spanish-speaking world, where tradition in high competitive research does not exist in our field.

Workshops and courses are usually built to address relevant topics with a pragmatic approach in diverse formats. The most active ones are focused on either advanced chronic care or ACP:

- ▶ Advanced chronic care:
 - a. *How to look after patients with advanced chronic conditions in health and social services and territories*. This workshop (of 4–6 hours) has been performed 43 times in 5 years during the period 2012–2017, in seven different countries (Spain, Italy, Portugal, Argentina, Australia, Scotland and France). It is adapted to different settings and needs ('How to improve palliative approach in your service' for any kind of services), organisations (hospitals and multiservices organisations) or territories ('How to improve palliative approach in your district'), bringing together all the organisations.
 - b. *MOOC Comprehensive and Integrated Care of People with Advanced chronic conditions* (in Spanish): Disseminated through the Miriadax Platform. Five hundred and thirty-three professionals finished the first edition of the course (February–March 2017) and 441 answered the evaluation survey and 49% rated the course as 5 out of 5 regarding global satisfaction. A second edition of this course starts in November 2018.
- ▶ Advance care planning:
 - a. This workshop of 4–6 hours was performed 17 times from 2014. It has been performed mostly in Spain and in different settings, mainly hospitals and primary care services, as well as in 14 conferences.
 - b. Online course (in Catalan): this online course was elaborated in agreement with the Catalan Ministry of Health, mainly for professionals (primary care and social care) working into the community. It started in October 2016,

Features

Table 3 PhD projects of the chair of PC ICO/UVic-UCC for the period 2012–2017

University	Title	Status
University of Vic- Central Catalonia University (UVic-UCC)	Identifying individuals with advanced chronic conditions who may benefit from an early palliative care approach. Using the NECPAL CCOMS-ICO tool: population-based prevalence, predictive validity for mortality and predictive models	Finished February 2016
UVic-UCC	Identifying patients with palliative care needs in a tertiary hospital in Buenos Aires, Argentina	Finished March 2016
Autonomous University of Barcelona (UAB)	Effectiveness of psychosocial interventions in the reduction of suffering in patients with Advanced chronic conditions	Finished March 2016
UVic-UCC	Adequacy of pharmacological prescription for patients with advanced chronic conditions, with a person-centered model	Finished May 2016
UVic-UCC	Prevalence and characteristics of people with advanced chronic conditions in a tertiary hospital in Barcelona	Finished June 2016
UVic-UCC	Living with advanced COPD: experiences and needs of patients and careers at the end of life	Finished July 2016
UVic-UCC	Advanced frailty as a key element for the identification and decision-making for patients with advanced chronic conditions	Finished December 2016
UVic-UCC	Comparative randomized multicentered simple blind study of two conversion ratios of parenteral vs oral methadone in patients with advanced cancer and pain	Finished December 2016
UVic-UCC	Effectiveness, efficiency and impact of a proposal of improving organization of care for patients with advanced chronic conditions	Finished April 2017
UVic-UCC	Care models: service's Integration for caring persons with complex chronic conditions	Finished September 2017
University of Barcelona (UB)	Impact of a case-management program for patients with advanced chronic conditions	In process
UVic-UCC	Amyotrophic lateral sclerosis in the region of South-Barcelona: characteristics and use of resources of patients	In process
UVic-UCC	Home care support teams in Catalonia: structure, process and main outputs at 25 years	In process
UVic-UCC	Evaluation of the Catalan program for care of complex chronic conditions	In process
UVic-UCC	Standardization and impact of intercurrent processes in persons with advanced frailty	In process
UVic-UCC	Impact of a training program in the competencies of primary care professionals on advance care planning	In process
University of Andorra	Population based prevalence and characteristics of persons with advanced chronic conditions in Andorra	In process
UVic-UCC	Description of a comprehensive system for advanced chronic patients in the county of Osona	In process
UAB	Effectiveness of psychosocial intervention in 102.000 patients attended by "la Caixa" Program	In process
UVic-UCC	Prevalence and characteristics of pain in advanced chronic patients identified in the community	In process

ICO, Catalan Institute of Oncology; PC, palliative care.

and it has been attended by a total number of 3780 professionals up to date, with a satisfaction of 8.4 out of 10.

- c. *MOOC Advance Care Planning* (in Spanish): disseminated through the Miriadax Platform. A total of 505 professionals finished the first edition of the course (April–May 2018). From those who answered the final evaluation questionnaire (n=382), 57% rated the course as 5 out of 5 regarding global satisfaction.

Research and transference of knowledge

Research aims at influencing policies and all types of organisations to implement measures of quality improvement for the care of people with advanced chronic conditions, with a public health vision. Research lines are focused on the epidemiology, clinics, organisation and ethical issues related to the so-called first transition at the end of life, and the psychosocial and spiritual care. We design and implement projects from a populational or individual perspectives, either observational or longitudinal, and focused in outcomes, quantitative, qualitative or mixed and in different settings.

The main partner has been the Catalan DoH, which has considered (and formally agreed) the CPC as a think-tank to evaluate the situation, identify areas and propose actions of improvement of PC in the Catalan Healthcare System. This link is especially relevant as it allows the CPC to influence decision making. Additionally, we have agreements with other organisations, both private and public, for knowledge transference. The built partnerships show the respectful multidisciplinary partnership between PC, geriatrics, primary care, policy and managerial disciplines and the interdisciplinary partnership with professionals.

Main research projects developed from 2012 to 2018 are summarised in [table 2](#).

During the period 2012–June 2018, we have published a total of 59 articles and 6 books. Summary of key results on publications is shown in [figure 2](#), and full list of publications is available in the online supplementary appendix. Moreover, a total of 10 PhD theses were presented between 2016 and 2017, and 10

Table 4 Impact of chair of PC (period 2012–Jun 2018)

Programme				Education and training activities					Knowledge transfer and research	
NECPAL	PSICPAL	PDAPAL	SOCPAL	PC Master	Psychosocial care postgraduate	Workshops	Pregraduate training	Online activities	PhDs	Publications
Validation of tool for early identification of PC needs (NECPAL CCOMS-ICO)	Validation of tools to identify and assess psychosocial PC needs (DME, DME-C, ENP-E).	Development of Catalan program of ACP.	Implementation of programme in Vic.	13 editions (1998–2017); 550 professionals trained.	Four editions (2015–2018).	Chronic care: 43 workshops in seven countries (2012–2017).	Faculty of Medicine at the UVic-UCC.	ACP online course: 3780 students (2016–).	10 PhDs presented (2016–2017).	59 articles published in peer review journals.
Implementation of Programme of Early Identification in Catalonia	Elaboration of two manuals in psychosocial care.	Development of training activities to implement ACP programme.	Impulse of Spanish network of compassionate communities (taskforce with five Spanish cities).	Most attendants working in PC services.	140 professionals (psychologists, social workers, nurses and physicians) trained.	ACP: 17 workshops in Spain (2014–2017).	Nursing school at the University of Barcelona	Chronic care MOOC: two editions, 533 students in the first edition (February–March 2017).	10 PhDs currently in process.	Six books.
Validation and translation of NECPAL tool into 10 different languages				Evaluation of the impact of 20 years of advanced training in PC.			Nursing school at Gimbernat University.	ACP MOOC: one edition, 505 students (Apr–May 2017).		

ACP, advance care planning; MOOC, massive open online course; PC, palliative care.

more are currently under development, as described in [table 3](#).

DISCUSSION

The experience of the UVic-UCC/ICO Chair of PC has been the first initiative of a specific PC chair in our country. PC and palliative medicine have a global challenge to be present in the academic field. Such challenge is particularly unresolved in Spain, where PC is not yet recognised as a medical specialty nor subspecialty.

The main topics developed at the chair of PC (palliative chronic care, psychosocial and spiritual care and involving society through compassionate communities) are aligned with the major challenges of PC in the 21st century. The impact of our initiatives and a summary of main outcomes is shown in [table 4](#).

The model of PC academic institution that we have developed is an academic-mixed project, linking research, training, policy and support to other private or public organisations for the design, implementation and evaluation of programme and services. This model is based on previous own long-standing experience and like other international institutions that combine the activities with different emphasis, from strictly academic to more diverse organisations that are oriented to generate and transfer knowledge.

Our commitment is to provide pragmatic and feasible approaches to improve the quality of care in practice. Additionally, funding restrictions to research in the field of PC in Spain, which has to compete with other disciplines that have research background, has become a key factor in the absence of a funding policy for PC in contrast to those developed in other countries.²⁰ As

a result, we have been forced to orient our activities to those that could get specific funding.

The values, principles and the mission are based on the consideration of PC as a human right and advocacy to insert PC in all healthcare systems, with a great society involvement. These values are concreted in the public health and community perspectives as universal coverage (all patients, all settings and all countries), equity, quality, access and of sustainability. Added to this, the values of commitment to compassionate care, ethical approach and humanism, and the pragmatic view of producing real changes in care.

We identify the lack of competitive research projects and grants as one of our major weaknesses. Other areas of improvement have to do with assuring funding, sustainability, visibility and expansion. Future directions for this chair position include academic recognition and consolidation of the team. Additionally, this paper is descriptive and based in our own data. However, it shows a model of success in the development of education, research, knowledge transference, international cooperation and social programmes. We consider that the impact of the experience, although having some aspects difficult to measure, is quite relevant. Most initiatives developed have been innovative and have proposed effective models for PC improvement. According to the vision, the chair aims to be acknowledged as a beacon for innovation of PC, with public health and the right to PC perspectives as essential identity components. Moreover, we believe the experience described can support more widespread adoption by other institutions or healthcare systems, which could strengthen the popularisation of PC worldwide.

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