**From EAPC recommendations to a blended, standardised, free-to-access undergraduate curriculum in Palliative Medicine: the EDUPALL project.**

 **Abstract**

Background: The WHO recommend[[1]](#footnote-1)s that “palliative care should be integrated as a routine element of all Undergraduate Medical Education”. However, the provision of training for medical undergraduates is variable; only 18% of 51 European countries having mandatory training in Palliative Medicine. EDUPALL is an ERASMUS+ funded international collaborative project to develop and pilot an undergraduate programme for training in Palliative Medicine.

Objective: To critically review and revise current EAPC Recommendations for the Development of Undergraduate Curricula in Palliative Medicine, translating these into an updated curriculum document.

Design: Clinicians, Academics and Researchers from Romania, Ireland, Germany, Austria, Spain and the UK, reviewed the EAPC recommendations using a variant of consensus methodology, Nominal Group Technique. From the updated document, four working-groups translated each recommendation into a specific Learning Objective, and developed associated learning outcomes, stratified by domain: Attitude; Cognition; Skills. The Outcomes and Objectives were organised into discrete teaching units and transferred into a Curriculum Template, identifying notional hours, teaching and assessment strategies. To ensure Quality Control, the draft template was circulated to experts from 17 European Countries, together with a brief survey instrument, for peer review purposes.

Results: All 17 reviewers returned overwhelmingly positive comments. There was large agreement that: the teaching units were logically organised; Learning Outcomes covered core training needs; Learning Objectives provided guidance for teaching sessions; learning modalities were appropriately aligned; assessment strategies were fit for purpose.

Conclusion: An updated and standardised curriculum has been developed and provides a platform for the sequential development of the next phases of the EDUPALL project.

**Background**

Palliative Care is increasingly recognised as an International Human Right, with the World Health Assembly (WHA, 2014) calling for equitable access to Palliative Care for all regardless of diagnosis (1, 2)A recent Lancet Commission report estimated that in 2015, 25.5 million deaths involved serious health-related suffering; equating to six billion days of significant and potentially avoidable distress (3). .

According to the World Health Organisation (WHO), the main barrier to increased access to Palliative Care is a lack of trained healthcare professionals (4). Furthermore, the WHO recommends that “palliative care should be integrated as a routine element of all Undergraduate Medical Education”(2). However, the provision of training for medical undergraduates is variable; for example, the Atlas of Palliative Care in Europe (2019) identified that only 9 of the 51 countries assessed have mandatory training in Palliative Medicine in all medical schools (5).

Initiatives to assist in integration of Palliative Care in undergraduate training have been developed.In 2007, the European Association for Palliative Care (EAPC) developed, using a modified Dephi process, guidelines for training in Palliative Care at undergraduate level. The recommendations were subsequently revised and republished in 2013 (6). These, and other national guidelines provide a platform for palliative care clinicians and educators to develop and integrate training for undergraduate medical students; EDUPALL is one such initiative (7).

**EDUPALL**

EDUPALL is an *Erasmus+* funded three-year project aimed at producing a comprehensive Palliative Care training programme for undergraduate medical students. The EDUPALL Collaborative is a multi-professional, interdisciplinary group with participants from Romania, Ireland, Germany, Austria, Spain and the UK. The objectives of the EDUPALL project are to develop and pilot a free-to-access blended undergraduate training programme, producing: a universally applicable curriculum that can be adopted and implemented (and adapted) where required; teaching resources; resources for faculty training and development; and an implementation and evaluation programme. Such resources are in great need in many countries. For example, Romania (the lead country of the project) is expanding the implementation and development of palliative care services nationally whilst facing the challenge of introducing compulsory palliative care training in both medical and nursing programmes (8).

**Objective**

This paper reports on the first objective of the EDUPALL project, the development of a universally applicable undergraduate palliative medicine curriculum.

**Design**

To design and develop a model undergraduate curriculum, the first step engaged was to critically review and revise the 2013 EAPC Recommendations. Subsequent to the updating of the EAPC Recommendations, a Curriculum Matrix was developed to enable the development of learning outcomes and derivative learning objectives. For quality control, peer review external to the project group was sought.

**Step 1 - Critical Review and Revision of the 2013 EAPC Recommendations.**

Nominal Group Technique (NGT) was employed to review the 2013 EAPC recommendations, during the first international meeting of the EDUPALL project in January 2018. NGT is a structured approach to small-group discussion used to reach consensus and is particularly suited to topics where there is a limited evidence base (9, 10). The NGT prevents the domination of the discussion by a single person and encourages all group members to participate.

**Procedure.**

In accordance with the approach to NGT, four stages were engaged

**Stage 1 - Introduction and Explanation:** On day 1 of the first meeting, presentations were delivered to the group on the overview of the EDUPALL Project, the 2013 EAPC Recommendations, and the key theoretical underpinnings of the stages required in developing medical curricula. This provided participants with both the contextual and procedural information required to participate in the revision of the 2013 EAPC Recommendations.

**Stage 2 - Sharing of ideas and discussion in individual group sessions.**

The twenty-two members representing the six EDUPALL consortium countries were divided into four supra-themed groups (Table 1). Each group was structured to maximise international and professional diversity (Clinicians, Academic Clinicians, Nurses, Psychologists, Educationalists, Anthropologists, Researchers).

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| Table 1 – EDUPALL Themed Groups |
| Group 1 | Basics of Palliative Care 5% + Psychosocial and Spiritual Aspects 20%; |
| Group 2 | Pain Assessment and Management 25% |
| Group 3 | Symptom Assessment and Management 25% |
| Group 4 | Ethical & Legal Issues 5% + Communication 15% + Teamwork & Self-Reflection 5%. |

Each group systematically and critically reviewed the 2013 EAPC recommendations for relevance, purpose and potential omissions/additions according to the designated themes (Table1). Each group was guided by an appointed facilitator from within the EDUPALL core team, who invited and encouraged participation from each member of the group in the focussed discussion. Participants were encouraged to seek explanation and clarification on discussion points. The process engaged ensured participants had the opportunity to contribute and decisions made by the group were recorded.

**Stage 3 - Wider Group Discussion.**

The four groups were brought together for a wider discussion on each theme, to consolidate opinion and agree on the findings. Each group took turns to present their recommendations for revision, inclusion or exclusion and explanation of their thoughts. Any discrepancies on the recommendations were subsequently discussed by the wider group until a resolution was agreed by majority.

**Stage 4 - Consolidation.**

The revisions and additions were centrally collated and integrated to provide an updated version of the EAPC Recommendations.

**Step 2—Development of the EDUPALL Curriculum.**

Following the development of the updated EAPC Recommendations, each themed group was asked to identify discrete Teaching Units (e.g. Loss, Grief and Bereavement), and to complete a matrix with:

1. Learning Outcomes against the existing/newly developed recommendations;
2. Learning Objectives that address: Cognition/Knowledge and Understanding; Abilities/Practical Skills; Attitude/Personal Competencies;
3. Learning Modality / Teaching Methods: Teaching Plans/Methods and Assessment Strategies to address Outcomes and Objectives;
4. Required resources – to support teaching and training.

After early feedback, the matrix was further refined to enable identification of Assessment Strategies for the Teaching Units, with notional hours outlined for each Teaching Unit to help provide structure to the final curriculum.

**Step 3 Peer Review.**

To ensure Quality Control, a two-part Peer Review process was undertaken.

1. Internal Peer Review: each teaching unit within each supra theme was reviewed by the Project Director (DM) and the Work Package Lead (SM). Comments and suggestions on the teaching units were returned to group leads/members for further review/amendment and production of a final teaching unit to be integrated within the curriculum matrix. Once completed, the matrix was circulated across the EDUPALL team for further comment.
2. External Peer Review: the draft matrix was circulated to experts from 27 European Countries including: the Board of the EAPC; the EAPC Reference Group for Medical Education and Training; reviewers that had previously participated in the development and revision of the existing EAPC Recommendations. A brief survey instrument was developed and distributed to encourage feedback on the structure, content and organisation of the curriculum. Feedback was returned to supra theme leads for consideration in the development of the final curriculum matrix.

**Results**

The results of the process were the revised EAPC recommendations for undergraduate medical curricula and an EDUPALL curriculum matrix.

**Revised EAPC Recommendations**

Several revisions were made to the original EAPC Recommendations (Table2). Updates included additional objectives within the Pain and Symptom Management themes, and the development of a specific set of knowledge goals pertaining to Care of the Dying, reflecting an increased attention, understanding and specialisation within symptom management, and a recognition of the importance of the care specific to the last days and hours of life. A revised version of the 2013 EAPC Recommendations was adopted by the EAPC as an updated version and hosted is the EAPC website.

**Table 2 - EDUPALL Consensus Revisions for the EAPC Recommendations**

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| **Topic** | **Knowledge** | **Awareness of** |
| 1. **Basics of Palliative Care**
 | No revisions and/or addition |
| 1. **Pain and Symptom Management**
 | ~~Bowel Obstruction~~ *Treatment options for partial or complete bowel obstruction* * + - *Surgical and non-surgical*
		- *Pharmacological and non-pharmacological*

Pulmonary Symptoms: Dyspnoea* + - *Non-Pharmacological approaches*
		- *Principles and mechanisms of action of oxygen therapy*
		- *Assessment of patients and/or families concerns re breathlessness / suffocation*

Pulmonary Symptoms: Cough* + - *Causes, mechanisms and management (Pharmacological and non-pharmacological)*

Neuropsychiatric Symptoms* + - *Coma*

*De*Hydration *and excess of fluids** + - *Types and Effects of Dehydration*
		- *Patients and Families perspectives and understanding concerning hydration*
		- *Oedema*

Anorexia, Cachexia and Fatigue* + - *Nutrition*
		- *Patients and Families perspectives and understanding*

~~Thirst, dry mouth~~ replaced with *“Oral Care”* * + - *Sore Mouth*
		- *Swallowing Problems*

Dermatologic Symptoms* + - *Ulcerating Tumours*
		- *Pressure Ulcers*

“Emergencies in Palliative Care” (was identified as a distinct theme)* + - *Superior vena cava obstruction*
		- *Major Haemorrhage*

Care of the Dying * *Recognising the terminal phase*
* *Discussions/awareness of patients/family*
* *Care Plans*
* *Anticipatory prescribing for Pain; Respiratory Tract Secretions; Nausea/Vomiting; Dyspnoea*
* *Hydration and Nutrition*
* *Terminal Anxiety and Sedation*
* *Review of all medications / clinical interventions in best interest of the individual patient*
* *Care after Death*
 | ***Recognitio****n: Identification of key signs and symptoms****Assessment/Diagnosi****s: Approaches to assessment (including validated assessment tools and scales where relevant)****Effect****s: Potential effects of the Symptom on the patient; their family -e.g. meanings ascribed to symptoms; fears associated with each symptom****Management:*** *Approaches to providing symptom relief, including pharmacological and non-pharmacological approaches*  |
| 1. **Psychosocial and Spiritual Aspects**
 | No revisions or additions |
| 1. **Ethical and Legal Issues**
 | Discussion of decision-making *process in Palliative Care* ~~at the end of life, particularly abatement~~, particularly withdrawal or withholding of a treatment ~~The proper ways of~~ Negotiating and placing ‘Do-not-attempt cardio-pulmonary resuscitation orders (DNACPR or DNR) Exploration of ~~proxy decision making, advance directives and~~ advance care planning*Palliative Care as a human right: justice and access* Distinction between ~~accepted~~ Palliative Care ~~practice~~ and euthanasia*: double effect*  | Ethical aspects in medical *and shared* decision-makingThe reflection of one’s own ethical attitude - (moved to section 6)The reflection of one’s own attitude towards death and dying - (moved to section 6)*Partnership vs Paternalist Models (Optional)*The reflection about the physician’s role in treatment of *Palliative Care* ~~end of life~~ patients |
| 1. **Communication**
 | Models of *effective* communication~~Differentiation:~~* ~~Verbal vs non-verbal communication~~
* *Meeting patients communication styles and level*
* *Active listening*
* *Empathetic communication*
* *Signposting to reliable sources of information*

~~Special situations of communication~~ *Specific communication issues* * *dealing with collusion (optional)*
 | ~~One’s own shortcomings and strong points in perception and communication~~*Knowledge of strengths and weaknesses in communication skills*  |
| 1. **Teamwork and Self-Reflection**
 | *Roles and responsibilities of Palliative Care Multi-Disciplinary Team (MDT) and effective delegation**Respect and value in Palliative Care team**Self-care* * Burn-out *– prevention and avoidance*
* *Mindfulness*
* *Perceptions of doctor’s role (saviour vs healer;* avoidance and prophylaxis)
 | *Reflection of managing burdens* ~~one’s own way how to manage burdens – one’s own way how to manage~~ *and personnel concern*~~The chance of debriefing oneself by~~ *Supervision provision* *The reflection of one’s own ethical attitude* *The reflection of one’s own attitude towards death and dying*  |

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| Key for Text Changes | *Italics* = new/inserted text Normal font = existing text (presented for context)~~strikethrough~~ = deletion of existing text |

**EDUPALL Curriculum Matrix**

In accordance with the parameters of the project funding, the proposed curriculum framework was required to merit 3 European Credit Transfer System (ECTS) points, with 72 hours of training, organised into: theoretical training (14 hours); bedside training (28 hours); online training (30 hours) and self-directed study. The structural outline for the EDUPALL curriculum was determined at the first EDUPALL meeting and ordered in accordance with the six educational domains, as outlined in the existing EAPC Recommendations:

1. Basics of Palliative Care – 5%;
2. Pain (25%) and Symptom Management (25%) – 50%;
3. Psychosocial and Spiritual Aspects – 20%;
4. Ethical and Legal Issues – 5%;
5. Communication – 15%;
6. Teamwork and Self-Reflection – 5%.

From the revised EAPC Recommendations, the EDUPALL Curriculum Matrix was developed.

**Step 3. Peer Review**

A small number of additional Learning Outcomes and associated Learning objectives were suggested for inclusion within the matrix, including:

* Differentiating between Palliative Care and Palliative Medicine;
* The inclusion of Paediatric Palliative Care;
* Palliative Care for Minorities.

There were conflicting thoughts regarding the number of hours dedicated to teaching sessions for Symptom Control, with peer reviewers indicating that more time was required, whilst others suggested truncating certain elements (e.g. Dermatological Care) in order to expand Care of the Dying. Key areas where increased focus was required included “Advance Care Planning” and “Determining the Dying Phase / Prognostication.”

Challenges were raised regarding the overall notional 72 hours for the curriculum, with several peer reviewers identifying opportunity for expanding current provision within existing undergraduate medical curricula may be limited.

The additional Learning Outcomes, Learning Objectives and other issues suggested by external peer review were considered by the themed groups. Where appropriate, recommendations were integrated into the final Matrix; for example, Care of the Dying was increased from two to three notional hours. All reviewers that were consulted returned overwhelmingly positive comments on the draft Curriculum Matrix. There was large agreement that:

* Teaching units were logically organised;
* Learning Outcomes covered core training needs;
* Learning Objectives provided guidance for teaching sessions;
* Learning modalities were appropriately aligned;
* Assessment strategies were fit for purpose.

Indeed, one reviewer commented that:

“We have carefully compared the presented curriculum with the curriculum running on the Faculty of Medicine – the document prepared is better drafted, more comprehensive and creates the excellent basis for Undergraduate Education in Palliative Care. It can serve as a sample for further development of the teaching of Palliative Care in medical universities (schools) worldwide.”

**Discussion**

An updated and standardised curriculum has been developed providing a platform for the sequential development of the next phases of the EDUPALL project (Appendix 1). The experience of the EDUPALL consortium members, combined with the input from established expert reviewers resulted in a curriculum that is relevant to the wider European and International palliative medicine community. The new Curriculum also provides an opportunity to set a quality threshold for benchmarking undergraduate medical training and education across Europe

The dearth of training in Palliative Care is a critical issue, with newly qualified doctors likely to commence clinical practice with varied skill sets and many unprepared to meet the Palliative Care needs for an increasing number of patients and their families. A study of patients in acute hospital settings, identified that one in three patients would die within the calendar year, and that one in ten patients would die on their first admission (11). It is therefore no surprise to learn that evidence from the UK, also identifies that with their first year of practice, newly qualified doctors will care for 120 patients who are in the last three months of life, and 40 patients in their last days and hours of life (12).

The provision of training for medical students in Palliative Care is crucial, not only for the patients and families, but also for the professional development of doctors. An international scoping review, reported that medical training in Palliative Care addresses issues central to the professional curriculum, with students identifying that training in palliative care helped them to become better doctors (13).

**Locating Palliative Care within existing undergraduate medical curricula.**

There is scant evidence to support the ideal time for medical students to participate in education about Palliative Care, and no suggestion or guidance is provided within the current EAPC Recommendations. A systematic review of the provision of palliative care training found no evidence to indicate an optimal time during undergraduate training for learning the principles and practice of Palliative Care (14). In a further review of the impact of Palliative Care education spanning the six years of medical training at Cambridge University, a tendency for more positive attitudes to develop in the later ‘clinical’ training years (Years 4-6) was noted, whereas more negative attitudes occurred during the early ‘core science years (Years 1-3) (15).

With no clear evidence on when the optimal time to learn about Palliative Care, the EDUPALL group reviewed their own experience in delivering training. It was perceived that training was most likely to have meaningful impact in the later years of training, once sufficient scientific knowledge and practical clinical experience had been attained, enabling the holistic and patient centred focus of Palliative Care to be located within the context of clinical care. It was also thought that a distinct block of training time focussing specifically on Palliative Care is required to ensure conceptual clarity on the place of Palliative Care within clinical care. This was as opposed to teaching integrated within other specialty training. Nevertheless, it is recommended that short priming sessions should be engaged in early years of medical training, as preparatory work for engaging with the Palliative Care curriculum.

A key challenge for those seeking to promote Palliative Care education into undergraduate training is the pragmatic ability to find space in an already crowded medical curriculum. In a survey of curriculum coordinators, Gibbins (16) noted eight factors that can help facilitate the adoption and integration of Palliative Care within existing curricula; key within these is the need for a champion within the medical school curriculum development board/group, to advocate for the inclusion of Palliative Care within the existing curriculum.

**Developing Faculty and Clinical Placements**

Increasingly, as Palliative Care is identified as core or a compulsory component within undergraduate education, consideration needs to be given to the development of an appropriate faculty to support and facilitate training, and to develop partnerships with Palliative Care service providers who can provide access to clinical training. Accordingly, suggestions from the EDUPALL group are provided (Table 3) on the “ideal” criteria for appropriate clinical placements, and minimum criteria for trainers/program leaders, respectively.

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| Table 3. Criteria for Palliative Care centres accredition for clinical placement |
| Criteria for Educational/Clinical Placements | **Criteria for Programme Leaders** |
| 1. Palliative Care services in place for > 2 years;
2. Estabished Multidisciplinary team (MDT);
3. Opportunity for Continuous Professional Development (CPD) for members of MDT;
4. Caring processes aligned with national standards and/or legislation;
5. Range of complexity and diversity of cases (patients); at least 20% non-malignant disease;
6. Number of admissions per month > 20
7. Capabile of running a recognised educational programs;
8. Educational Infrastructure (teaching room / IT access / support/coordinating staff?);
9. Access too informational materials for patients and families and for professionals (the last will be included in the library);
10. Provides access to academic and clinical mentorship.
 | 1. A Consultant Physician;
2. Palliative Care Speciality / Subspecialty Qualification;
3. Clinical experience in Palliative Care (> 5 years);
4. Position in a Specialist Palliative Care centre ( > 50% of time);
5. Recogniton at Academic / Institutional level for the role of coordinator in Palliative Care Education;
6. Formal training in Leadership / Education (e.g. Post Graduate Certificate);
7. Participates in annual peer review.
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Further guidance on the necessary competencies of a good clinical teacher are proposed by Paal et al., including: Organising the Learning; Knowing the Field and State of the Art; Being Ready to Learn; Teaching and Leading by Example; Being Real (17).

**Strengths and Weaknesses**

The process for developing the curriculum has had its limitations. For example, NGT discussions were conducted in English, although this was not the first language of many of the attending experts. However, by using facilitators familiar with both English and the expert’s primary language we tried to overcome this challenge and encourage the participation and contribution of each expert. Equally, although we did not use a Delphi process, the curriculum was based on existing and well-developed guidelines that had used modified Delphi technique. Further, wide international peer review was ensured in the 3rd step of the process and the multi-professional composition of the consortium should be viewed as a strength.

**Conclusion**

As the changing demographic profile of Europe’s population results in increased need, and increased demand for palliative care services, the EDUPALL curriculum is a first step in ensuring that ‘tomorrow’s’ doctors are prepared to meet that need. The curriculum described is based on the updated EAPC recommendations of 2013, designed as a 72-hour blended curriculum that provides three European Credit Transfers (ECTS). The curriculum covers seven major themes: Basics of Palliative Care; Psychosocial and Spiritual Issues; Pain Management; Symptom Management; Ethical and Legal Issues; Communication; and Teamwork and Self-Reflection. The clinical experience of the EDUPALL consortium members, combined with the input from established expert reviewers and academics and researchers has resulted in an online free-to-access curriculum that is relevant to the wider European and International community. The EDUPALL Curriculum also provides an opportunity to set a quality threshold for benchmarking undergraduate training and education across Europe.

The overarching aim of the EDUPALL project is the development of a universally adaptable and applicable curriculum, freely available in multiple languages. EDUPALL will provide a platform for the greater integration of Palliative Care within undergraduate medical training programmes across Europe.

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1. Abstracts has appeared in EAPC conference proceeding. [↑](#footnote-ref-1)