



EUROPEAN PAIN FEDERATION

# CORE PAIN CURRICULUM FOR BACHELOR / PRE-REGISTRATION PHYSIOTHERAPY PROGRAMMES

AUGUST 2023

Endorsed by



## **Dedication**

This curriculum is dedicated to the millions of people throughout Europe who live with pain, and to the physiotherapy educators and clinicians who teach students evidence-based practice to help them manage their future patients

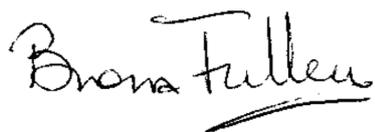
## Foreword

The European Pain Federation (EFIC®) has developed a core pain curriculum for Bachelor / pre-registration Physiotherapy programmes in order to provide up to date pain science knowledge, clinical reasoning and best practice management for physiotherapy educators. This curriculum articulates the learning outcomes to be achieved through teaching and learning approaches to suit the diversity of pain physiotherapy across Europe. It is in line with our desire to cover factors relevant to physiotherapy education in the assessment and treatment of people with pain. This curriculum should be read in conjunction with the current recommended reading list which can be found on the European Pain Federation EFIC® website.

This curriculum is a dynamic instrument and will be reviewed and updated on a regular basis, sensitive to advances in physiotherapy research and education.

We are forever grateful to the Faculty of Pain Medicine of Australia and New Zealand for allowing us to use their curriculum as a basis for our physiotherapy curriculum which has been modified.

We also thank the reviewers (listed at the end) who contributed to the original physiotherapy curriculum from their professional expertise and time to reviewing and adapting the curricula for use in Europe. We are especially grateful to the steering committee (Catherine Blake, Catherine Doody, An De Groef, Morten Høgh, Albere Koke, Joseph Mc Veigh, Keith Smart and Henrik Bjarke-Vaegter.



Dr. Bróna Fullen

President of the European Pain Federation EFIC®

July 2023



Professor Harriet Wittink

Vice-Chair EFIC Education Committee

## Endorsement

As the landscape of healthcare evolves, the essential role of physiotherapy in addressing pain management has become increasingly pronounced. It is with great privilege and conviction that we offer this forward for the curriculum on pain education within physiotherapy bachelor programs, a collaboration between the European Pain Federation and esteemed contributors from the European Network of Physiotherapy in Higher Education.

This comprehensive curriculum stands as a testament to the progressive strides being made in acknowledging pain as a multifaceted entity within the realm of healthcare. Pain, a universal human experience, demands a nuanced understanding, especially within the purview of physiotherapy, where it intersects with movement, function, and overall well-being.

The collaborative efforts between the European Pain Federation and the European Network of Physiotherapy in Higher Education have yielded a curriculum that not only addresses the theoretical underpinnings of pain but also translates this knowledge into practical applications tailored for aspiring physiotherapists. By bridging the gap between academic knowledge and clinical proficiency, this curriculum ensures a holistic approach to pain education, enriching the skill set of future physiotherapy professionals.

Furthermore, the endorsement and support provided by the European Network underscore the commitment to advancing the standards of physiotherapy education. Their scientific contributions have been instrumental in shaping and refining sections of this curriculum, infusing it with contemporary insights and evidence-based practices.

We commend the dedication of all those involved in conceptualizing and developing this curriculum, recognizing their collective effort to enhance the educational framework for aspiring physiotherapy professionals. This curriculum will undoubtedly serve as a cornerstone in fostering competent, empathetic, and proficient physiotherapists who are equipped to address the complexities of pain within diverse healthcare settings.

In conclusion, we extend our wholehearted endorsement to this curriculum, anticipating its adoption within physiotherapy bachelor programs across Europe and beyond. May its implementation herald a new era of excellence in pain education within the field of physiotherapy, empowering practitioners to make meaningful contributions to patient care and well-being.

Board of Directors

The European Network of Physiotherapy in Higher Education (ENPHE)

August 2023



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## Introduction

Pain is a major unsolved healthcare problem worldwide. It is universal, with no age, race, social class, national or geographic boundaries. It has enormous associated costs; financial, as well as being a tremendous burden in terms of degraded quality of life for the sufferer, his/her family and immediate society. Estimates place the cost of chronic pain, as a disease state, in the very substantial category of cardiovascular disease and cancer. The incidence of chronic pain tends to increase with age; with the success of curative and preventative medicine, and the consequent increase in average life spans, the problem of chronic pain is likely to increase for the foreseeable future.

Pain management is the primary reason people attend physiotherapy for treatment and physiotherapists are essential members of healthcare team, managing people with pain within a biopsychosocial framework. Pain science is a core field in a physiotherapy curriculum and is included across the three core areas of musculoskeletal, neurology and cardiorespiratory education. Currently in Europe, there is no standardised curriculum or common training framework for physiotherapists in relation to pain, with professional education about pain management repeatedly documented as inadequate worldwide. Hence the inequities in pain science knowledge across Europe may result in inequitable health service delivery and costs and most importantly to significant differences in patients' quality of life.

This EFIC core pain curriculum for Bachelor / pre-registration Physiotherapy programmes seeks to harmonise pain science education across Europe by offering a roadmap for all academic Physiotherapy programmes seeking to ensure their graduates can meet the evolving challenges of pain management in clinical practice. This is essential in a global society if we are to produce highly skilled physiotherapists who demonstrate a whole-person and compassionate cross-cultural approach to patient care using evidence and research skills to inform and advance physiotherapy practice.

The European Pain Federation EFIC<sup>®</sup> is a multidisciplinary professional organisation in the field of pain research and medicine, consisting of the 38 Chapters of the International Association for the Study of Pain (IASP<sup>®</sup>), which are the IASP approved official national Pain Societies in each country. Established in 1993, EFIC<sup>®</sup>'s constituent Chapters represent close to 20,000 researchers, physicians, nurses, physiotherapists, psychologists and other healthcare professionals across Europe, who are involved in pain management and pain research. Further information is on our website, <http://www.efic.org>.

To support education EFIC has a number of educational resources including the Pain Academy, EFIC Pain Schools and Pain Fellowships. Further detail can be found here <https://europeanpainfederation.eu/>

## Scope of practice

Physiotherapy aims to promote and maximise patients' health status and well-being using a person-centred perspective, within a biopsychosocial framework.

This incorporates the evaluation of the person in his/her whole and the understanding of all those aspects that can limit a patient's well-being. Pain is arguably the most frequent and distressing experience patients report, and it is important that every health professional has a comprehensive understanding of biological mechanisms as well as of the pain experience, to allow an adequate treatment.

In addition, physiotherapists must utilise a broad base of skills including, but not limited to, effective communication styles, education, and reflective practice when treating and managing patients using best practice recommendations.

Clinically this incorporates the evaluation, and management of persons with pain. The field of pain physiotherapy spans three major clinical areas:

1. Acute pain
  - Post-operative
  - Post-trauma
  - Procedural
  - Acute episodes of pain in medical conditions
  
2. Cancer-related pain
  - Pain due to tumour invasion or compression
  - Pain related to diagnostic or therapeutic procedures
  - Pain due to cancer treatment
  
3. Chronic/persistent pain – including more than 200 conditions described in the IASP Taxonomy.

## Core pain curriculum for Bachelor / pre-registration Physiotherapy programmes

The purpose of this curriculum is to define the required learning, and assessment which will allow for effective physiotherapy clinical practice upon graduation.

### **Curriculum Aims**

1. To articulate the scope of practice recommended required to be taught at Bachelor / pre-registration Masters level in Physiotherapy programmes across Europe including what is necessary for quality patient-centered care
2. To outline the breadth and depth of knowledge, range of skills and professional behaviours required to be taught at Bachelor / pre-registration Masters level in Physiotherapy programmes to ensure effective patient-centered pain management
3. To provide consistency of standards and outcomes across different countries in Europe, through the establishment of a benchmark of standard competency for physiotherapy education at Bachelor / pre-registration Masters level

## Learning Objectives

Upon completion of this pain curriculum, the student Physiotherapist should be able to:-

### Section One: Pain Science and Knowledge

- Demonstrate a knowledge and understanding of the underlying physiology and biology of acute and chronic pain.
- Discuss the International Association for the Study of Pain (IASP)'s definition of pain and neuroscience-related phenomena.
- Discuss the complex and multidimensional nature of pain.

### Section Two: Principles of Assessment and Measurement

- Demonstrate knowledge and understanding of the biopsychosocial assessment of pain.
- Demonstrate ability to determine pain mechanisms: nociceptive, neuropathic and nociplastic pain.
- Ability to apply the World Health Organisation (WHO) International Classification of Functioning, Disability and Health (ICF) in the context of a biopsychosocial assessment of pain across the lifespan.
- Describe patient and healthcare provider factors that may influence the assessment of pain.
- Demonstrate an understanding of the specialist assessment by other healthcare professionals.
- Demonstrate ability to use appropriate tools for assessing risk of chronicity as well as outcome measures (physical activity, sleep, activities of daily living) across the lifespan.

### Section Three: Principles of Treatment

- Develop justify and negotiate with the patient individually tailored evidence-based pain treatment and management plan and options.
- Consult and collaborate with colleagues and other healthcare professionals to optimise patient wellbeing and enhance patient outcomes.
- Critically discuss indications, efficacy, complications, management, effects and patient follow-up for treatment modalities related to pain Physiotherapy.
- Educate patients about their specific condition in terms of pain neurophysiology, behavioural therapies, and exercise.

### Section Four: Pain Subgroups / Special Patient Populations

- Discuss pain assessment and management strategies for specific populations.
- Discuss issues related to the ongoing management of different pain presentations from an equality, diversity, inclusion perspective-related to gender, ethnicity, socioeconomic status, age and aging, obesity, and co-morbidities.
- Demonstrate a basic understanding of the categories of pharmacological options available for pain management.
- Educate patients about their specific condition in terms of pain neurophysiology, behavioural therapies, and exercise.



**Section One:**  
**Pain Science and Knowledge**

## 1.1 Pain Mechanisms

1.1.1	Discuss the distinction between nociception and pain
1.1.2	Discuss: current theories on pain, including the three dimensions in the neuromatrix theory: the affective and sensory dimensions of pain: Sensory-discriminative Motivational-affective, Cognitive-evaluative
1.1.3	Describe mechanisms of transduction, transmission and modulation in nociceptive pathways
1.1.4	Describe the anatomy and physiology of ascending and descending pathways of nociceptive modulation in the central nervous system
1.1.5	Describe the somatosensory system

## 1.2 The International Association for the Study of Pain (IASP)'s definition of pain and neuroscience-related phenomena

1.2.1	Define common terminology and definitions used in Pain Medicine e.g. acute, chronic, neuropathic, spontaneous, breakthrough
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## 1.3 The Complex and Multidimensional Nature of Pain

1.3.1	Discuss changes that occur in the brain during chronic pain and their possible impact on therapy and brain-related functions (including cognition, memory and mood)
1.3.2	Discuss behavioral and cognitive pain explanations, including fear-avoidance, catastrophising, operant and classical conditioning
1.3.3	Discuss neurophysiological overlap between chronic pain and common comorbidities, including stress, sleep, mood and anxiety

## 1.4 The Impact of Pain

1.4.1	Epidemiology of pain
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**Section Two:**  
**Principles of Assessment & Measurement**

## 2.1 Assessment

2.1.1	Demonstrate the ability to undertake a comprehensive biopsychosocial assessment of the patient across the life span using the ICF-framework, including an understanding of the various “flags” and how they apply to assessment and treatment (yellow, red, blue, black, orange)
2.1.2	Demonstrate the ability to determine mechanism(s) of pain in patients; nociceptive, neuropathic and nociplastic pain
2.1.3	Demonstrate an ability to identify patient and healthcare provider factors that may influence treatment (patients and healthcare providers’ attitudes and beliefs, health literacy levels, patient and their family’s response to the experience of pain and illness including affective, cognitive and behavioural response)
2.1.4	Demonstrate the ability to use appropriate prognostic tools for assessing risk
2.1.5	Demonstrate the ability to utilise a person-centred approach and achieve a deep understanding of how pain affects the life of the patient (biologically, functionally, psychologically as well as work and social relations)
2.1.6	Demonstrate an understanding of the specialist assessment by other specialist medical and allied health professionals and when to refer appropriately

## 2.2 Outcome Measures

2.2.1	Demonstrate the ability to undertake a physical assessment including levels of physical activity, function in daily life (functional tests and capacity evaluations) and sleep for different patient groups, such as children, elderly, etc.
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## **Section Three: Principles of Treatment**

### 3.1 Communication

3.1.1	Develop, justify and negotiate with the patient an individualised management plan and options for treatment, based on evidence and clinical reasoning and within the context in which the patient's experience of pain occurs
3.1.2	Demonstrate an ability to differentiate those patients who require a multimodal approach from one practitioner, multidisciplinary approach from a team, and/or referral to medical specialists and/or allied healthcare professionals
3.1.3	Demonstrate the process of shared decision making and negotiating a therapeutic alliance with the patient towards implementation of the management plan, taking into account the patient's level of health literacy

### 3.2 Education

3.2.1	Demonstrate the ability to teach patients about their specific condition in terms of pain neurophysiology
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### 3.3 Behavioural Therapies

3.3.1	Demonstrate a basic understanding of cognitive and behavioural therapies, including Cognitive Behavioural Therapy, graded activity, graded exposure and motivational interviewing and recognize the difference between pain contingent and time contingent treatment
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### 3.4 Communication

3.4.1	Demonstrate and apply knowledge of evidence-based physical activity and exercise prescription in the management of chronic pain
3.4.2	Demonstrate an ability to incorporate patient education in exercise prescription regarding goal setting, coping, pacing, motivation, graded activity, graded exposure

### 3.5 Treatment Modalities

3.5.1	Critically discuss indications, efficacy, complications, management and patient follow-up for treatment modalities related to pain physiotherapy
3.5.2	Understand the principles and application of placebo and nocebo theory in patients with pain

**Section Four:**  
**Pain Subgroups / Special Populations**

## 4.1 Specific Pain Conditions

4.1.1	Demonstrate the ability to identify pain subgroups based on multidimensional assessment and clinical reasoning; including acute and chronic pain, nociceptive and neuropathic pain; widespread pain (fibromyalgia), pain related to cancer; visceral pain and complex pain presentations
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## 4.2 Pain Assessment and Management Strategies for Specific Populations

4.2.1	Discuss issues related to the ongoing management of different pain presentations from an equality, diversity, inclusion perspective- related to gender, ethnicity, socioeconomic status, obesity, age and aging
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## 4.3 Additional Considerations

4.3.1	Discuss the risk factors and mechanisms involved in the transition from acute to chronic pain, and critically evaluate the evidence for measures including rehabilitation that may reduce (mitigate) that transition and promote recovery. This will include management of post-surgical pain
4.3.2	Demonstrate the ability to adapt assessment strategies, treatment plans and evaluation to the specific needs of patient groups, including but not limited to pregnant women, older adults (including those with dementia), infants, children and adolescents, patients with mental health disorders, with active or past substance abuse problems, patients with intellectual and/or physical disabilities and patients from linguistically and culturally diverse backgrounds
4.3.3	Demonstrate a basic understanding of the categories of pharmacological options available for the management of neuropathic and nociceptive pain e.g. NSAIDS, opioids, antidepressants, anticonvulsants, capsaicin, cannabinoids, corticosteroids

## Acknowledgements

The European Pain Federation EFIC® is grateful to the Faculty of Pain Medicine of Australia and New Zealand for allowing us to originally use their 2014 curriculum as a basis for our Pain Medicine curriculum. This was adapted for our Pain Physiotherapy curriculum (2017), and now for core pain curriculum for Bachelor / pre-registration Physiotherapy programmes.

We thank the teams who worked on the European Pain Federation EFIC core pain curriculum for Bachelor / pre-registration Physiotherapy programmes for their time and professional expertise.

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[www.efic.org](http://www.efic.org)

