



The Pain Management Core Curriculum for German Medical Schools



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An interdisciplinary teaching approach
based on the German Medical Licensure Act (valid since: October 1, 2003)

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Passed on February 1, 2008 by the steering committee of the *DGSS* –
Deutsche Gesellschaft zum Studium des Schmerzes e.V. (German chapter of the IASP –
International Association for the Study of Pain)



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I. Introductory Remarks

This core curriculum has been specifically developed to provide the content for a defined number of teaching sessions in interdisciplinary pain management for third to fifth year medical students. It is not intended as a complete summary of required pain knowledge. Examples of common pain conditions are used for teaching the essential concepts of pain management - within an interdisciplinary context, and in a bedside setting.

As formal lecture time will decrease in the future, there will be a necessary reduction in transmission of factual knowledge and a greater emphasis on the understanding of essential concepts. This core curriculum also enables instructors from different disciplines to share a common “philosophy” of pain knowledge. This will clarify learning objectives and avoid unnecessary overlap.

The curriculum headings and chapters have been chosen for their relevance to the clinical requirements of trainee general practitioners. As a result, the understanding of the development of chronic pain has been emphasised, and overlapping with other courses has been avoided.

The curriculum has been designed as a core curriculum to allow additional expansion, according to the requirements and special interests of any local faculty. The educational objectives were formulated according to Bloom’s taxonomy*.

It is expected that the core curriculum will be updated biannually to incorporate new research findings and advances in evidence-based practice.

* Educational objectives (learning targets) are classified by learning domains according to a classification scheme. Distinctions are made between cognitive, affective, and psychomotor behaviour. Bloom’s taxonomy is the most significant taxonomy in the cognitive domain. The cognitive domain encompasses behaviour patterns such as knowing, remembering, thinking, problem solving, concept formation, and creative thinking.

The areas of knowledge, comprehension, and application are relevant to this curriculum

- a) ‘knowledge’: terminological knowledge, knowledge of individual facts, principles, theories, and structures (side effects of medications, treatment options),
- b) ‘comprehension’: learnt information is recognized within another context by way of extrapolation and interpretation (identification of a patient at risk of developing chronic pain, correlations between analgesia, and postoperative stress syndrome),
- c) ‘application’: encountering a new problem and resolving it by means of a suitable abstraction (preparation of basic individual therapy plans, completion of a prescription conforming to the prescription regulations for narcotics).

Reference: Bloom B. (1971) Taxonomy of Educational Objectives, The Classification of Education Goals, Handbook I: Cognitive Domain / Deutsches Ärzteblatt 2004; 101: 28.

II. Educational Framework for Teaching Interdisciplinary Pain Management

- Multidisciplinary lecturers (ideally interdisciplinary instructors working in tandem).
- Teaching of the main concepts of the core curriculum (optional expansion with additional material from the DGSS curriculum will depend on the local availability of any additional teaching time).
- Supplementation of lectures and practical instruction with self-study based on the core curriculum (which parallels the educational objectives).
- Required sessions:
 - 5 lectures lasting 45 minutes each,
 - 5 clinical bedside teaching sessions lasting 90 minutes each (The groups should include a maximum of 6 students and include taking a patient history followed by a case discussion).
- Overview of module structure:

Module	Lecture	Bedside instruction	Chapter
1	Introduction: physiology and psychology of pain, history and examination		1.1 to 1.3
2	Acute pain	Acute pain	2
3	Cancer pain	Cancer pain	3
4	Neuropathic pain	Neuropathic pain	4.1 to 4.2
5	Development of pain chronicity	Development of pain chronicity	5.1 to 5.2
6		Specific therapeutic challenges*	6.1 to 6.3

* Optional; can also be integrated into modules 1 through 5.

III. Structure of the Core Curriculum for Teaching Pain Management

0 Preface

1 Introduction: principles of pain management

- 1.1 Principles of pain management
 - 1.1.1 Definition of pain
 - 1.1.2 Physiology of pain
 - 1.1.3 Psychology of pain
 - Affective factors
 - Cognitive and behavioral factors
 - Social influences
 - Psychiatric and psychosomatic comorbidity
 - Placebo effect
 - 1.1.4 Classification of pain: acute vs. chronic pain
 - 1.1.5 Classification of pain: nociceptive vs. neuropathic pain
 - 1.1.6 Treatment indications: acute vs. chronic pain
 - 1.1.7 Typical comorbidity of pain
- 1.2 Diagnosis
 - 1.2.1 General pain history
 - Structured history taking
 - Physical examination
 - Diagnostic tools
 - Differential blocks
 - 1.2.2 Pain Rating Tools (analogue scales, questionnaires, pain diaries)
- 1.3 Principles of pain treatment
 - 1.3.1 Causal vs. symptomatic principles of treatment
 - 1.3.2 Pharmacological vs. non-pharmacological pain treatment
 - Pharmacological pain management (opioids, non-opioid analgesics, co-analgesics)
 - Non-pharmacological pain management (psychotherapy for pain, counter-irritation procedures, physiotherapy)
 - Invasive vs. non-invasive pain management
 - 1.3.3 Patient education

2 Acute pain: post-operative vs. post-traumatic pain

- Post-operative stress syndrome
- Principles of acute pain management
- Stepwise approach to acute pain management
- Pain emergency
- Specific procedures

3 Cancer pain

- Etiology of cancer pain
- WHO Pain Relief Ladder
- Principles of cancer pain management
- Prescription regulations for narcotics

- 4 Neuropathic pain**
 - Definition and diagnosis of hyperalgesia and allodynia
 - 4.1 Example: polyneuropathy
 - 4.2 Example: herpes zoster

- 5 Development of pain chronicity: distinction between acute and chronic pain**
 - Definition
 - 5.1 Example: chronic, non-specific back pain
 - 5.2 Example: headache due to overuse of medication

- 6 Specific therapeutic challenges**
 - 6.1 Children
 - Communication
 - Specific pharmacology
 - 6.2 Old age and dementia
 - Communication with demented patients
 - Specific pharmacology
 - 6.3 Pregnancy and breastfeeding
 - Specific risks for unborn and breastfed children

IV. Core Curriculum for Teaching Pain Management: Educational Objectives

0 Preface

Every practicing physician is confronted with pain problems of their patients. Pain is the most common reason for patients to see their general practitioner. For this reason, every physician should be able to diagnose pain correctly and institute treatment using simple algorithms and interventions.

The German Medical Licensure Act of October 1, 2003 refers to pain and its treatment only in general terms, and the existing curricula and learning objectives are not suitable for teaching pain management. This curriculum therefore addresses medical students during their clinical semesters providing them with the core knowledge and core skills for the diagnosis and treatment of pain in a comprehensive and coherent fashion, both in outpatient and inpatient settings. The students should acquire the content of the curricula in an appropriate fashion by the means of bedside instruction, lectures, practical training and OSCE examinations (Leila-N-M, Eur J Pain 2006; 10: 167 / Sloan-PA, JPSM 2001; 21: 298).

The practitioner should become skilled in “general pain management”, and is not expected to acquire the specialized knowledge required to diagnose and treat complex chronic pain disorders. The goal is to enable the alleviation of neuropathic, acute post-traumatic, post-operative and cancer pain, to recognize patients with chronic pain, to use measures to prevent the development of chronic pain and to arrange for further specialized treatment when indicated. Furthermore, the practitioner is to understand that pain is a multidimensional and complex phenomenon, which necessitates specific diagnostic tools and effective management.

Primarily, students should:

- be able to identify patients with pain,
- learn to understand a patient’s pain and all its implications for the patient’s quality of life,
- know and apply the methods of analgesia which offer effective pain control for the majority of patients, and to classify those methods in a graded scheme,
- be able to evaluate the effectiveness of a particular pain management,
- know and be able to apply the indications for appropriate psychotherapeutic treatment for pain.

In particular, students should be able to differentiate between and to specifically treat four main syndromes:

- acute post-traumatic and post-operative pain,
- cancer pain,
- neuropathic pain,
- chronic pain.

The essential *cognitive* learning objectives for the students are:

- the pathopsychological consequences of inadequately treated acute pain;
- the treatment of cancer pain (and its importance as an integral part of palliative medicine);
- to get an understanding of neuropathic pain;
- to know the difference between patients with straightforward pain syndromes and those with more complex underlying chronic pain mechanisms, and the subsequent implications for treatment.

The essential *applied* learning objectives are that students should be able to perform the following:

- the unassisted taking of a specific pain history;
- consider the biopsychosocial dimensions of pain;
- a simple symptom-oriented physical examination;
- the writing of prescriptions conforming to the prescription regulations for narcotics;
- provide examples of simple analgesia schemes for post-operative, neuropathic and cancer pain.

The essential *emotional* learning targets are:

- a knowledge of potential (unconscious) interactions and feelings of helplessness towards chronic pain patients;
- an awareness of the dynamics and significance of cancer pain for the patient with consideration of the destructive and terminal nature of the illness.

The *Core Curriculum for Teaching Pain Management* is guided by the following underlying principles:

- patients have the right to structured and adequate pain treatment;
- the diagnosis of pain and its management are an integral part of all medical care;
- pain is a biopsychosocial phenomenon;
- pain has to be regularly assessed and documented, both quantitatively and with regard to its functional consequences;
- pain management requires an interdisciplinary and interprofessional approach;
- continuing education, the reviewing of treatment algorithms, and the application of ethical principles are a prerequisite for a professional approach to pain management.



Further information is available from:

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**Excerpt from: The Pain Management Core Curriculum for German Medical Schools
(ISBN 978-3-9806595-6-7)**