

**Scandinavian Society of Anaesthesiology and Intensive Care**

**Nordic Education in Advanced Pain Medicine  
– a post-specialist diploma course**

**Course description**

**7<sup>th</sup> edition, September 2021**

## **Introduction**

The Nordic Education in Advanced Pain Medicine for Anaesthesiologists was established within the frames of the Scandinavian Society of Anaesthesiology and Intensive Care Medicine (SSAI) in 2001. The educational programme was originally designed for anaesthesiologists who had completed specialist training but due to the interest from other medical professionals, the course has been opened for other specialists interested in pain (e.g. neurology, neurosurgery, rheumatology, gynaecology, social medicine, paediatrics, palliative care, general practice).

The pain programme itself is contained within a legally structured, non-commercial, non-profit association with its own economy and without sponsors from outside the organization. The SSAI constitutes the umbrella organization.

The educational programme is comprised of a theoretical, scientific and clinical part. The theoretical part consists of 5 courses that adhere to the educational guidelines given by the International Association for the Study of Pain (IASP) in the "Core Curriculum for Professional Education in Pain". The scientific part consists of a project, survey or a similar task related to the pain area, approved by the educational board. Finally, the clinical part should last at least 3 months and take place at a classified multidisciplinary pain centre/clinic which has been approved by the educational board (see later for details).

There are no examinations during the course, but the student has to fulfil the criteria stated below regarding the three parts of the course (theoretical courses, project and clinical stay) to get the diploma.

More than 240 Nordic doctors have been granted the Diploma in Advanced Pain Medicine since 2001.

## **The Educational Board (the faculty)**

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## **Secretariat**

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All correspondence is done by mail.

The educational programme has its own internal website: <https://www.nakos.no>

Central Business Register: CVR number is DK-32582508

## **The pain problem in general**

Chronic non-cancer pain is a substantial health problem with prevalence rates between 20 and 25% in adult populations. For many people, the pain started without any definite trauma but a large number (5 - 40%) of patients with acute posttraumatic/surgical pain develops a chronic pain state. It is estimated that up to half of the patients in the acute posttraumatic/postoperative phase suffer from unrelieved severe pain with an increased risk of cardiovascular and pulmonary morbidity and mortality. Pain is even more prevalent in cancer patients and up to 90% experience pain and other bothering symptoms in the more advanced stages of the disease. Furthermore, an increasing number of cancer survivors develop a chronic pain condition.

Chronic pain conditions are associated with reduced quality of life and substantial societal costs. These costs are related to multiple and unnecessary investigations, ineffective treatments, compensation and/or support during disease and invalidity, and indirectly through loss of working capacity. Between 5 and 10 % of patients with chronic pain need specialized treatment typically in a multidisciplinary pain centre.

## **Types of pain treatment services**

Internationally specialist staffed pain treatment units are divided into: pain practice, modality orientated clinics, acute pain services, pain clinics and multidisciplinary pain clinics and centres. These are described in IASP's Recommendations for Pain Treatment Services from 2014, originally adopted 2009. Transferred to the Nordic countries and adjusted to the international classification requirements the mentioned units may be defined and separated as follows.

## **Pain Practice**

A single provider may have a pain practice if he or she is licensed in his or her specialty. It is recommended by IASP that he or she has completed specialty pain medicine training or equivalent, and is certified in pain management by the appropriate local or national credentialing organization. This provider must be knowledgeable about the contributions of biological, psychological, and social/environmental factors to pain problems. There must be a system for obtaining consultation as needed from health care providers from other specialties. In addition, the provider should refer patients to a multidisciplinary pain clinic or centre whenever there are diagnostic or therapeutic issues that exceed the provider's capabilities.

## **Modality oriented pain clinics**

A modality oriented clinic is a health care facility which offers a specific type of treatment and does not provide comprehensive assessment or management. Examples include nerve block clinic, transcutaneous nerve stimulation clinic, acupuncture clinic, biofeedback clinic, etc. Such a facility may have one or more health care providers with different professional training. Because of its limited treatment options and the lack of an integrated, comprehensive approach, it does not qualify for the term multidisciplinary. In addition, the provider should refer patients to a multidisciplinary pain clinic or centre whenever there are diagnostic or therapeutic issues that exceed the provider's capabilities.

## **Acute pain services**

An acute pain service (APS) as the name suggests helps provide pain control in cases of acute pain after major surgery and trauma for hospital in-patients. The APS is able to provide advanced pain management modalities such as intravenous patient controlled analgesia with opioids (IV PCA), continuous epidural infusions, neuraxial opioids, intravenous lidocaine infusions and continuous peripheral nerve blocks.

Staffing is by medical personnel, particularly anaesthetists and nurses with special expertise in acute pain management. There should be close liaison with physiotherapists, psychologists, pharmacists and other paramedical personnel as well as collaboration with surgical and other specialties involved in the patient's overall acute perioperative care.

An after-hours service with appropriate consultant involvement should be provided including service for patients with acute or acute-on-chronic pain problems.

The service should include development of specific policies, protocols and guidelines for treatment and monitoring as well as education of physicians, nurses and other staff members and students.

A quality improvement program is essential and research should be encouraged but is not obligatory in non-university hospitals.

### **Pain Clinic**

A pain clinic is a treatment unit focusing upon the diagnosis and management of patients typically with chronic pain but also pain of more acute character and cancer related pain conditions (Finland and Denmark). A pain clinic may specialize in specific diagnoses or in pains related to a specific region of the body. This type of unit may be private or public, and when at hospitals often linked to the anaesthesiologic department.

The staff consists of physicians, nurses, secretaries, possibly with a limited multi-professional capability through appropriate consultative and therapeutic services.

It is recommended by IASP that a pain clinic should have access to and regular interaction with at least three types of medical specialties or health care providers. If one of the physicians is not a psychiatrist, a clinical psychologist is essential.

For hospital bound pain clinics the teaching and educational obligations will be in that hospital for relevant groups of the staff and there are no obligations for research.

### **Multidisciplinary Pain Clinics**

A multidisciplinary pain clinic differs from a multidisciplinary pain centre only in that research and academic teaching activities are not necessarily included in its regular programs. As with a multidisciplinary pain centre, the multidisciplinary pain clinic staff should include clinicians from a variety of medical and other health care disciplines; all clinicians should have documented expertise in pain management. The clinicians who assess and treat patients in the pain clinic should include physicians, nurses, mental health professionals (e.g., clinical psychologist, psychiatrist), physiotherapists and/or occupational therapists. The clinic should be able to treat any type of pain problem; thus, there must be a system for obtaining consultation as needed from physicians from disciplines not included on the staff. A multidisciplinary pain clinic may have diagnostic and treatment facilities for outpatients, inpatients or both. The clinicians should communicate with each other on a frequent and scheduled basis about patients and pain centre policies, procedures, and therapies. Care is delivered in a programmed and coordinated manner, and is patient-centered, up-to-date, evidence-based, and safe. Clinical activity must be supervised by an appropriately trained and licensed clinical director with documented expertise in pain management. All the providers in the clinic should be appropriately qualified and licensed in their specialty and should be knowledgeable about the contributions of biological, psychological, and social/environmental factors to pain problems.

Patient assessment and treatment should be multidisciplinary/interdisciplinary, involving

appropriate specialists as needed, to ensure optimal management of all biomedical and psychological aspects of pain problems. Treatment should aim to improve pain and/or pain management, and also to improve patient physical, psychological, and work and social role functioning. The clinicians should be familiar with all relevant treatment guidelines, and these should be considered in planning clinical activities. The clinic staff should routinely collect and summarize data on the characteristics and outcomes (including but not limited to pain intensity, psychological distress, function, and quality of life) of the patients evaluated and treated, and should engage in continuous quality improvement efforts.

### **Multidisciplinary Pain Centres**

A multidisciplinary pain centre is located at a university hospital and is distinguished by the broad range of its clinical staff, patient care services, pain conditions treated and educational and research activities. It should be part of or affiliated with a higher education and/or research institution.

The staff should include clinicians from a variety of medical and other health care disciplines; all clinicians should have documented expertise in pain management. The clinicians who assess and treat patients in the pain centre should include physicians, nurses, mental health professionals (e.g. clinical psychologist, psychiatrist), physiotherapists and/or occupational therapists. The centre should be able to treat any type of pain problem. Thus, there must be a system for obtaining consultation as needed from physicians from disciplines not included on the staff.

A distinguishing feature of a multidisciplinary pain centre is that the clinicians from different specialties work together in the same space and communicate with each other on a frequent and scheduled basis about patients, pain centre policies and procedures, and therapies offered in the pain centre. Care is delivered in a programmed and coordinated manner, and is patient-centered, up-to-date, evidence-based, and safe. Clinical activity must be supervised by an appropriately trained and licensed clinical director with documented expertise in pain management. All the providers in the centre should be appropriately qualified and licensed in their specialty and should be knowledgeable about the contributions of biological, psychological, and social/environmental factors to pain problems.

The centre should serve as a model of excellence for the structure, processes, and outcomes that are essential for high quality pain management. Patient assessment and treatment should be multidisciplinary/interdisciplinary, involving appropriate specialists as needed, to ensure optimal management of all biomedical and psychological aspects of pain problems. Treatment should aim to improve pain and/or pain management, and also to improve patient physical, psychological, and work and social role functioning. The clinicians should be familiar with all relevant treatment guidelines, and these should be considered in planning clinical activities. The centre's staff should routinely collect and summarize data on the characteristics and outcomes (including pain

intensity, psychological distress, function, and quality of life) of the patients evaluated and treated, and should engage in continuous quality improvement efforts.

The centre should be committed to advancing and applying current scientific knowledge related to pain, and to disseminating relevant information to patients, other health care providers and organizations, and the public at large, in order to improve the quality of pain management across the continuum of care. As the experts in pain management, the centre's staff is expected to act to improve pain management in local, regional, and national health care services. It is also expected that the centre provide educational activities and training in multidisciplinary pain management for clinicians from multiple disciplines (e.g. physicians of different specialties, clinical psychologists, nurses, physical therapists). Ideally, training should be provided at undergraduate, graduate, and postdoctoral/post specialist levels.

The centre should be actively engaged in research, ideally playing a leadership role. The centre should contribute to the evidence base for the treatment and management of pain, and train future pain researchers.

## **Classified pain units in the Nordic countries**

Pain treatment units are constantly changing. Therefore, it is not possible to keep an up-dated list. The students' clinical training at specific departments or institutions shall be approved by the faculty.

## **The requirements to be a pain specialist**

The most basic requirement for someone wanting to be a specialist in pain is an interest in both the phenomenon of pain and pain patients. Those patients with pain, especially chronic pain, are a difficult and needy group and not typical of those with chronic pain in a general population. To treat them, understanding of the individual with pain is important and takes time and patience. Current single modality treatments from invasive methods to pharmacology to psychological methods to rehabilitation are not very effective when used alone.

An individual's medical background or specialty is not the most important qualification. Prominent clinical researchers and other experts in pain come from various backgrounds, e.g. anesthesiology, rehabilitation, neurosurgery, neurology, internal medicine, psychiatry, psychology, etc. What is common is a burning interest in chronic pain and pain patients.

To function well as a pain specialist, the physician needs to step back a bit from a specialty focus. There are those that will use a single modality for all patients, i.e. spinal cord stimulation, opioids

or medications for neuropathic pain, nerve blocks, acupuncture, etc. Those are not pain specialists. A pain specialist is first and foremost a physician and all evaluations of pain problems must be more global than just a focus on the body part that is painful. A thorough general physical examination with particular focus on the neurological and musculoskeletal systems is necessary for all patients. This helps not only the physician but gains trust with the patient who often has never had a thorough examination, sometimes, no examination at all before coming to a pain specialist.

The pain specialist must also be a good listener and be able to listen not only to the noise (“I hurt!”), but also to the music (“Because of my pain, things are not going well at home”). Much information from the psychosocial side comes with listening to the patient. A pain physician needs to have some knowledge and interest in the psychosocial variables that are always associated with the complaint of pain.

The next stage can be to focus on the specific aspects of one’s specialty training that might be important for evaluation and/ or treatment of a particular patient. This may be the reason for the referral to a pain specialist but should not be the sole focus of the first visit.

Finally, if the pain specialist has a particular treatment modality that they use, such as spinal cord stimulation, addressing the appropriateness of this for a particular patient should be the final step. Since one size does not fit all, those who use a single modality without a careful history and physical examination cannot call themselves a pain specialist. Those clinicians are uni-dimensional and pain, both chronic and acute, is never a uni-dimensional problem. Pain must always be approached as a biopsychosocial phenomenon.

## **Purpose of the educational programme**

The course is an inter-disciplinary course that contains fundamental information for all medical specialties interested in the management of pain of all types and from all sources.

The emphasis is on recognizing that pain is a biopsychosocial phenomenon and that successful diagnosis and especially treatment of chronic pain should focus on the bio-, the psycho- and the social components. Each of these areas is addressed in the course without emphasizing which is most important. The importance of these three aspects of all pain, acute, chronic and cancer related is dependent on the individual patient. Those completing the course should have adequate theoretical and practical training to evaluate these different pain components and be conversant with the appropriate therapies although the participants’ actual practice is not likely to be all inclusive.

The course addresses the basic science, animal and clinical research as background to more practical issues that are addressed in group sessions with patient cases to provide a forum to apply

the lecture material. The clinical training beyond the lecture sessions is to ensure supervised contact with a broad selection of pain problems in an academic setting to provide practical experience. The research project is to provide hands on experience with the practical aspects of clinical research through actual involvement. The majority are encouraged to have a research project. A minority with no research experience and no local support for clinical research can focus on an in-depth literature analysis and review for a critical appraisal of the positive and negative aspects of the research behind the practice of pain medicine.

## **Description of the educational programme**

The course is a post specialist course for Nordic physicians with the intention to have a high level educational impact. Some basic knowledge of the pain area is considered to be a part of the student's background.

### **A: The theoretical courses**

Five theoretical courses lasting three days will be arranged in the Nordic countries.

One lecture will typically consist of 30 minutes presentation and 15 minutes discussion. Integrated group work sessions will also be included.

The courses will cover

- basic neurophysiology and neuroanatomy of pain
- epidemiology and evaluation of acute, chronic non-cancer and cancer-related pain
- pharmacological treatment of pain
- psychology and psychological treatment of pain
- multidisciplinary rehabilitation of chronic pain patients
- interventional treatment of pain
- pain in special patient groups
- ethics of pain management and research
- clinical research, reading literature, evidence-based medicine

### **Course no. 1. Stockholm/Uppsala**

Basics of pain management

Introduction to the field of pain medicine and the multidisciplinary concept including rehabilitation

Physiology and neuroanatomy of pain

Pain analysis

Epidemiology of pain

Transition from acute to chronic pain

Treatment menu (introduction)

Evidence based medicine, literature, clinical studies

Introduction to projects

### **Course no. 2. Helsinki**

Advanced pharmacological treatment of pain

Opioids

NSAIDS

Neuropathic pain medications

Cannabinoids

Spinal analgesia

Cancer pain

Pain in cancer survivors

Guided poster presentations of projects (all students)

### **Course no. 3. Oslo**

Different types of pain conditions

Musculoskeletal pain including back pain and fibromyalgia

Neuropathic pain

Paediatric pain

CRPS (chronic regional pain syndrome)

Headache

Visceral pain (e.g. pancreatitis, pelvic/gynaecological and urological pain conditions, IBS (irritable bowel syndrome))

Neuromodulation, rTMS, radiofrequency ablation, neurosurgery, etc

Guided poster presentations of projects (all students)

Project presentations (those already finalized)

#### **Course no. 4. Copenhagen**

The complex chronic pain patient

Pain rehabilitation programs

Comorbidities: psychological, sleep, physical function, etc.

The doctor/patient relationship and communication with pain patient

Acute and chronic pain

Functional pain syndromes

Addiction and pain

Project presentations (those already finalized)

#### **Course no. 5. Reykjavik**

Presentation of the projects

Pain in the sagas

Psychology of pain and psychological treatment of pain

Pain in the elderly

Ethics in pain research and treatment

A look into the future

#### **B: The scientific part of the education**

The research project will typically consist of running a smaller project or writing a survey or a similar task related to the pain area. The project shall be approved by the Faculty. The student shall have a local and a faculty tutor to monitor and ensure the progress of the project. This part should be finalised within the 2-year course period.

During the course, interim presentation in guided poster sessions (during the 2<sup>nd</sup> and 3<sup>rd</sup> courses) with focus on the progress of the project, evaluated by the faculty, will take place. When the student has finalized his/her research project it shall be presented and approved at the latest during the last course.

Soon after the 1<sup>st</sup> course, the title of the approved project shall be posted on the NAKOS website. An abstract of the finalized project shall be posted on the website no later than during course no. 5. This is mandatory for achieving the diploma.

### **C: The clinical training programme**

- Three months clinical training in a university based multidisciplinary pain clinic/centre is needed, during the 2 years course.
- The chairman of the student's home department has signed an agreement, to cover salary and housing if needed.
- A university hospital pain clinic/centre is the "host" and responsible for coordinating the training positions.
- A tutor shall be appointed from the university host clinic
- A written description of the suggested training programme (where, what and when?) shall be presented to the national SSAI Pain faculty soon after the first course, and then approved.

#### **The 3 months clinical training shall *ideally* contain work with and contacts with:**

- An out-patient pain clinic/centre in a multidisciplinary milieu (regular contact with several medical and paramedical specialties involved in pain treatment, including psychology/psychiatry)
- In-hospital acute pain consultations (cancer pain, and all kinds of acute and chronic pain in-patients)
- Pain rehabilitation programmes (e.g. physical reactivation, group therapy, pain modulating programmes, multimodal treatment, paramedical teams)
- Neuromodulation
- Analysis and treatment of (analgesic) drug addiction in pain patients

If all these components required for a "full training programme" are not available in one single university pain clinic/centre (which is a common situation)

- The training may be done in several clinics inside or outside the university hospital
- But the "components" must be coordinated by the tutor from the university clinic
- This should be planned together with the SSAI pain student.

Contact person in the SSAI pain faculty for questions concerning the clinical training period:

- The national representatives from your country.

## **Diploma**

To achieve the diploma, the student shall fulfil the following criteria:

1: Having participated in at least four of the five theoretical courses

2: Have finalized and presented a project approved by the faculty and at least with an abstract on the NAKOS website. Deadline is in the 3<sup>rd</sup> day of the 5<sup>th</sup> course.

3: Have had a clinical stay at a multidisciplinary pain centre/clinic lasting at least 3 months. The stay shall be approved by the supervising specialist at the department/departments and by the faculty.

Thereafter, the student will receive a Diploma in Advanced Pain Medicine signed by the President of SSAI and the Chairman of the Nordic Advanced Pain Medicine Course.

## **Practical issues**

### **Number of participants**

The educational programme is limited to 45 students. The target group is anaesthesiologists as well as specialists from other pain related specialities.

### **Language**

The language used during the course is English. The student shall be fluent in at least one of the Nordic languages and have mastered the English language sufficiently in speaking and writing.

### **Economy**

The fee for each theoretical course is DKK 7,000 (approximately 940 EURO).

All expenses for the education, travel and accommodation must be covered by the student's home department or by the student personally.

## **References**

Reference material accompanies the lecture handouts.

## **Announcements**

Announcements will be published in Acta Anaesthesiologica Scandinavica and in national journals and pain society publications.