



Brigham & Women's Hospital
Pain Management Center
Harvard Medical School Teaching Affiliate



Department of Anesthesiology, Perioperative and Pain Medicine
Brigham and Women's Hospital



RESIDENT EDUCATION IN PAIN MEDICINE

Prepared by:

Srdjan S. Nedeljković, M.D.
Paul D. Wang, D.O.

PAIN MANAGEMENT CENTER

Written Curriculum Summary – Table of Contents

Section 1: Pain Management Center Educational Objectives

Section 2: Scope of the Pain Medicine Training Program

Section 3: Types of Pain Managed and Organ Systems Treated

Section 4: List of Procedures Performed

Section 5: Pain Medicine Resident Rotation (CA I – II): Goals and Objectives

Section 6: Pain Medicine Resident Rotation (CA-III): Goals and Objectives

Section 7: Pain Medicine Mission Statement and Curriculum Statement

Section 8: Program Expectations As They Relate To Competencies

Section 9: Multidisciplinary Pain Management Goals and Objectives

Section 10: Didactic Conferences

Section 11: LMR Access, Precipio Access, PMC Notes, & DEA Numbers

Section 12: Chief Outpatient Fellow

Section 13: Evaluation Process (Evaluation of Residents and of the Program)

Appendix: Evaluation Form, Sample H&P, MRI Reference Sheet, & Low Back Pain Lecture

SECTION 1:

PAIN MANAGEMENT CENTER OBJECTIVES

- I. The Pain Management Center at the Brigham and Women's Hospital will provide its patients with the highest standard of care while setting exemplary standards in education of fellows and residents.

Trainees will develop clinical skills in the management of all patients who suffer from painful conditions. Also, trainees will develop skills in teaching, administration, and in research.

The main objective of this subspecialty training program will be to graduate physicians who have had a comprehensive, well-rounded training in all aspects of pain management.

- II. Trainees will participate in a wide variety of clinical situations pertaining to Pain Management in both the inpatient hospital and outpatient clinical setting. This will encompass the areas of acute postoperative, chronic non-cancer, and oncologic pain management.

Acute postoperative pain management: trainees will function as consultants for a wide variety of painful states occurring mainly after surgery, but also after injury. Acute pain is managed with IV PCA, epidural PCEA, and a number of regional anesthetic catheters. For cases which require specialized pain management care, trainees are expected to evaluate and examine patients, and prepare an assessment and a plan of care.

Chronic non-cancer and oncologic pain management: trainees will be exposed to an extensive variety of patients with cancer related pain, sickle cell pain, and other chronic non-cancer pain syndromes, as well as unusual chronic postoperative pain. Trainees are expected to obtain complete and comprehensive histories, perform complete physical exams, and formulate a differential diagnosis and a treatment plan.

SECTION 2

SCOPE OF THE TRAINING PROGRAM

The fellowship and residency program in pain medicine will provide a curriculum tailored to the needs of trainees based on their level of educational experience and training. The specific program expectations are outlined in the “Goals and Objectives” section of the curriculum, based on whether the trainee is a resident (CA I-II or CA-III) or whether the trainee is a fellow.

For both residents and fellows, the educational program will require competency in the six areas below. The program curriculum will define the knowledge, skills, and attitudes required and provide educational experiences as needed in order for trainees to demonstrate:

- a. Patient Care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.
- b. Medical Knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.
- c. Practice-Based Learning and Improvement that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.
- d. Interpersonal and Communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals.
- e. Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.
- f. Systems-Based Practice, as manifested by actions that demonstrate an awareness of an responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value.

Trainees will be involved under supervision in the following activities.

- 1) Assessment and evaluation of patients.
 - a) Initial evaluation and treatment of new patients.
 - b) Follow-up care of patients previously seen in the PMC.
 - c) Psychological evaluation and administration of testing.
 - d) Management of psychological needs of the patient and family.
 - e) Coordination of rehabilitation program for chronic pain patients.

- f) Follow-up care of patients with spinal cord stimulators and other implantable devices, infusion pumps, venous access devices, etc.
- 2) Procedures
 - a) Neural blockade (list enclosed of some of the procedures done).
 - b) Radiofrequency lesioning.
 - c) Implants (spinal cord stimulation, long-term epidurals, infusion devices).
 - d) Office procedures (trigger point injections, IV infusions, etc.)
- 3) Didactic and educational curriculum
 - a) Presentation and interaction in clinical and quality assurance conferences.
 - b) Participation in clinical research studies, clinical trials, literature searches, etc.
 - c) Interpretation of surface EMGs, instruction and trialing of units such as TENS, etc.
- 4) Adjunctive therapies
 - a) Instruction and monitoring of relaxation techniques, biofeedback.
 - b) Application of manipulation, acupuncture therapy.

The staff of the Pain Management Center is at all times accessible to the trainees. A conference room and two separate fellows rooms are located within the premises of the Pain Management Center, and contains a digital projector and viewing screen, a number of other electronic devices, a television set and a VCR, roentgenogram view boxes, and a blackboard. A comprehensive library of pain management topics is available to the trainees electronically through the Harvard Medical School, and all trainees have access to the Harvard Countway library. Also, there are hard copy print resources (journals and books) available within the Pain Management Center.

SECTION 3

TYPES OF PAIN MANAGED & ORGAN SYSTEMS TREATED

Pain Management Center trainees will become knowledgeable of a variety of pain syndromes as they affect the patient. Through the didactic conference series, each of the above conditions will be reviewed and discussed in depth, with a particular attention paid to the anatomical, physiological, and psychological contributors to each individual pain condition.

In addition, through daily patient evaluations and consultations, pain management center trainees will fulfill the above educational framework throughout the course of the year, either via exposure at Brigham and Women's Hospital or through affiliated rotations. Attending supervision and teaching will occur with all patient evaluations and consultations.

The organizational scheme that will be used follows the work published by the "Task Force on Taxonomy" under the International Association for the Study of Pain. Through the contents of the core curriculum, and with direct patient management and formal didactics, trainees will become knowledgeable in the following syndromes:

- 1) Generalized Pain Syndromes
- 2) Localized Syndromes of the Head and Neck
 - a) Neuralgias of the head and face
 - b) Craniofacial pain of musculoskeletal origin
 - c) Lesions of the ear, nose, and oral cavity
 - d) Primary headache syndromes
 - e) Pain of psychological origin of the head and neck
 - f) Cervical musculoskeletal disorders
 - g) Visceral pain in the neck
- 3) Spinal Pain Syndromes
 - a) Cervical spinal or radicular pain syndromes
 - b) Thoracic spinal or radicular pain syndromes
- 4) Local Syndromes of the Upper Limbs and Generalized Syndromes of the Upper and Lower Limbs
 - a) Pain in the shoulder, arm, hand
 - b) Vascular disease of the limbs
 - c) Collagen disease of the limbs
 - d) Vasodilating functional disease of the limbs
 - e) Arterial insufficiency of the limbs
 - f) Pain of psychological origin of the lower limbs

5) Visceral and other syndromes of the Trunk

- a) Visceral and other chest pain
- b) Chest pain of psychological origin
- c) Chest pain referred from abdomen or gastrointestinal tract
- d) Abdominal pain of neurological origin
- e) Abdominal pain of visceral origin
- f) Abdominal pain syndromes of generalized diseases
- g) Abdominal pain of psychological origin
- h) Diseases of the bladder, uterus, ovaries, and the adenexa
- I) Pain in the rectum, perineum, and external genitalia

6) Spinal and Radicular Pain Syndromes of the Lumbar, Sacral, Coccygeal regions

- a) Lumbar spinal or radicular pain syndromes
- b) Sacral spinal or radicular pain syndromes
- c) Coccygeal pain syndromes
- d) Diffuse or generalized spinal pain
- e) Low back pain of psychological origin with spinal referral

7) Local Syndromes of the Lower Limbs

- a) Local syndromes in the leg or foot: pain of neurological origin
- b) Pain syndromes of the hip and thigh of musculoskeletal origin
- c) Musculoskeletal syndromes of the leg

Reference: Merskey, H. and Bogduk N, (Ed.), Classification of Chronic Pain: Descriptions of Chronic Pain Syndromes and Definition of Pain Terms, IASP Press, Seattle, 1994.

SECTION 4

LIST OF PROCEDURES PERFORMED

This is a list of some of the modalities, procedures, and techniques performed in the Pain Management Center at Brigham and Women's Hospital, but is not 100% inclusive.

Peripheral nerve blocks
Epidural and intrathecal injections
Epidural and intrathecal catheters and pumps
Discography, nucleoplasty and other disc procedures
Joint and bursal sac injections
Electrical stimulation techniques
Acupuncture and acupressure techniques
Sympathetic nerve blocks
Hypnosis, stress management, and relaxant techniques
Modality and physical therapy
Intravenous regional blockades
Facial nerve blocks, including trigeminal nerve blocks
Ilioinguinal and other groin blocks
Intercostal nerve blocks
Paravertebral nerve blocks
Femoral and sciatic nerve blocks
Brachial plexus blocks
Trigger point injections
Radiofrequency of nerves and joints
Facet joint neurolysis
Epidural catheter insertions for continuous infusions
Epidural implantation of spinal cord stimulation
Epidural neurostimulator revisions and removal
Intrathecal insertion of drug reservoir pump
Placement of port-a-catheter
Lysis of epidural adhesions
Cryotherapeutic techniques (didactic sessions)
Isokinetic testing (didactic sessions)
Physical medicine and rehabilitation
Neurophysiologic testing (didactic sessions)
Chemical neurolysis techniques
Neurosurgical pain modalities (didactic sessions)

SECTION 5

EDUCATIONAL CURRICULUM

PAIN MANAGEMENT RESIDENT ROTATION (CA-I AND CA-II)

A. DEFINITION

Residents from the Brigham and Women's Hospital anesthesia residency program will rotate through Pain Management for approximately one month during either the CA-II year or during the second half of their CA-I year. While on the Pain Service, residents will divide their time between the Inpatient services (primarily acute postoperative pain, but also exposure in cancer pain and palliative care), and the Outpatient services (chronic and cancer pain clinic). The Inpatient experience will be at Brigham and Women's Hospital and the Outpatient experience will be primarily in the Pain Management Center at 850 Boylston Street.

B. GOALS

The goal of the CA-I / CA-II rotation in pain management is to provide the resident with a foundation in the care of patients with acute, chronic, and cancer pain. Because pain management is a multidisciplinary specialty, residents will become knowledgeable in the many specialties which interact to provide the best care to patients. This will include experience in both inpatient and outpatient facilities.

Knowledge to be gained will include the principles of acute pain management, using common modalities to treat postoperative pain. These include intravenous patient-controlled analgesia, epidural and other neuraxial analgesia, other regional anesthetic techniques, and their management and side effects. For chronic pain, residents will gain knowledge in the diagnosis, evaluation, and treatment of chronic pain syndromes, with particular attention paid to obtaining a history, performing a physical exam, and proposing a multi-modality treatment plan.

C. OBJECTIVES

- 1) Acute pain management - residents will be able to:
 - a) Know the pharmacology of opiates, non-narcotic analgesics, and nonsteroidal anti-inflammatory agents.
 - b) Know the pharmacology of local anesthetics and centrally acting drugs used in pain management.
 - c) Understand and perform assessment of pain and function.
 - d) Understand and be able to select between various techniques of pain management, including intravenous patient-controlled analgesia, epidural analgesia, other neuraxial drug administration, other regional anesthesia techniques, peripheral nerve blocks, TENS unit
 - e) Know the side effects and complications of acute pain management modalities, including their prevention and management.
- 2) Acute pain management - skills that the resident will achieve include:

- a) Placement of neuraxial catheters and be able to perform a variety of peripheral nerve blocks.
 - b) Program neuraxial infusion system pumps and intravenous PCA pumps, and otherwise program and manage such systems.
 - c) Be able to manage the side effects of these treatments.
 - d) Conduct acute pain service rounds and provide appropriate documentation of patient care.
- 3) Chronic pain management - residents will be able to:
- a) Discuss the pharmacology of opiates, nonnarcotic analgesics, and nonsteroidal anti-inflammatory agents.
 - b) Describe the pharmacology of centrally acting drugs.
 - c) Understand measurement and assessment of pain and function.
 - d) Understand the principles and indications of diagnostic testing.
 - e) Understand the role of nerve blocks in pain management.
 - f) Describe psychotherapeutic treatment principles, rehabilitation, and team management.
 - g) Know the basic principles of cancer pain management.
 - h) Discuss the principles of other chronic pain syndromes, including low back pain, myofascial pain, complex regional pain syndromes, and various atypical neuralgias.
 - i) Know how to evaluate and diagnose common pain syndromes.
 - j) Know the principles of multidisciplinary pain management.
- 4) Chronic pain management - residents will be able to perform:
- a) Taking a complete (but pain-oriented) history and physical examination (with particular emphasis on the neurologic and musculoskeletal examination).
 - b) Perform epidural and subarachnoid injections, as well as learn about other basic peripheral and central nerve block procedures.
 - c) Manage the side effects of the above procedures.
 - d) Perform diagnostic testing.
 - e) Utilize physical therapy and occupational therapy.
 - f) Utilize behavioral therapies.

D. SCHOLARLY ACTIVITIES

Residents will be expected to attend all regularly scheduled pain management conferences, and active participation by the resident in the presentation of these conferences is required. Each resident will also be expected to take a scholarly and professional approach to case-based teaching experiences as they occur during their rotation. Residents will be in attendance at the following conferences:

- 1) Pain Management daily subspecialty conference.
- 2) Pain Management weekly multidisciplinary conference.
- 3) Pain Management monthly Journal Review conference.
- 4) Pain Management monthly quality assurance conference.

The following textbooks will be referenced, and/or reading assignments will be given:

- 1) Wall and Melzack: Textbook of Pain
- 2) Tollison: Handbook of Pain Management
- 3) Fenton: Image Guided Spine Interventions
- 4) Pain Center Core Curriculum Book (compiled by Dr. Srdjan S. Nedeljković)

SECTION 6

EDUCATIONAL CURRICULUM

PAIN MANAGEMENT RESIDENT ROTATION (CA-III)

A. DEFINITION

A rotation in pain management of one or more months duration is provided as an elective for residents in the Brigham and Women's Hospital anesthesia residency program. While on the Pain Service, the CA-III resident may divide his time between the Inpatient serves (primarily acute postoperative pain, but also cancer pain and palliative care services), and the Outpatient services (chronic and cancer pain clinic). Alternatively, the resident may spend his entire rotation in either the inpatient or outpatient services, or may participate in a research elective oriented to pain medicine.

B. GOALS

The goal of the CA-III rotation in pain management is to train the resident in the care of patients with acute, chronic, and cancer pain. This will include experience in both inpatient and outpatient facilities. In addition to learning common modalities of pain management, the CA-III resident will learn more advanced techniques. Because pain management is a multidisciplinary specialty, the CA-III resident will learn to coordinate many specialties to best manage the patient. For a one-two month rotation, residents will develop skills in teaching, administration, and pursue scholarly activities. For a rotation greater than 2 months, residents will be expected to participate in research projects.

Knowledge to be gained will include the principles of acute postoperative pain management, using common modalities to treat postoperative pain. For chronic pain, knowledge will be gained in diagnosis, evaluation, and treatment of chronic pain syndromes, and the trainee will learn to interact with other specialists in managing chronic pain (i.e.: physical therapy and rehabilitation, psychology, orthopedics, oncology, etc.).

C. OBJECTIVES

- 1) Acute pain management - residents will be able to:
 - a) Demonstrate mastery of all objectives expected of a CA-I / CA-II resident.
 - b) Understand the anatomy and physiology of acute pain.
 - c) Understand and perform measurement and assessment of pain and function.
 - d) Know how to organize and manage an acute pain service.
 - e) Participate in continuing quality improvement and program evaluation.

EDUCATIONAL CURRICULUM

PAIN MANAGEMENT RESIDENT ROTATION (CA-III)

- 2) Acute pain management - residents will gain the following skills:
 - a) Demonstrate mastery of all skills of a CA-I / CA-II resident, and be able to independently perform such skills.
 - b) Be skillful and proficient in placement of neuraxial catheters and perform a broad range of peripheral nerve block procedures.
 - c) Be able to manage all complications and side effects from the above therapies.
 - d) Organize, conduct, and lead acute pain service rounds and provide appropriate documentation of patient care.
- 3) Chronic pain management - residents will be able to:
 - a) Demonstrate mastery of all objectives expected of CA-I / CA-II residents.
 - b) Discuss the anatomy and physiology of the pain projection system.
 - c) Describe the epidemiology, economic impact, and sociology of pain.
 - d) Know the pharmacology of opiates, nonnarcotic analgesics, and nonsteroidal anti-inflammatory agents.
 - e) Understand the pharmacology of centrally acting drugs in pain management.
 - f) Describe measurement and assessment of pain and function.
 - g) Understand the principles and indications of diagnostic testing.
 - h) Understand the role of nerve blocks in pain management.
 - i) Know the role of neuroablative procedures.
 - j) Understand psychotherapeutic treatment principles, rehabilitation, and the role of team management.
 - k) Describe principles of cancer pain management and palliative care.
 - l) Discuss the principles and techniques of management of other chronic pain problems.
 - m) Understand the principles of physical therapy, occupational therapy, and rehabilitation of the chronic pain patient.
 - n) Know the principles of multidisciplinary approaches to pain management.
 - o) Describe the organization of a pain management center.
 - p) Participate in quality improvement and program evaluation.
 - q) Understand disability assessment and rehabilitation.
- 4) Chronic pain management - residents will be able to perform these skills:
 - a) Demonstrate mastery of all skills expected of a CA-I / CA-II resident and be able to independently perform these skills.

PAIN MANAGEMENT RESIDENT ROTATION (CA-III)

- b) Perform a complete history and physical examination and demonstrate a treatment plan.
- c) Perform epidural and subarachnoid injections and a broad range of other peripheral nerve block procedures.
- d) Perform joint and bursal sac injections.
- e) Perform sympathetic blocks.
- f) Utilize behavioral modification.
- g) Utilize physical therapy, occupational therapy, and rehabilitative services.
- h) Utilize biofeedback, stress management, and relaxation techniques.
- I) Perform radiofrequency lesioning.

D. SCHOLARLY ACTIVITIES

Residents at the CA-III level who rotate in the Pain Management Center will be provided with the opportunity to participate in research projects, or to embark on their own projects with staff supervision. Instruction will include review of medical literature, preparation of manuscripts, evaluation of investigative methods, and interpretation of data. Residents will be exposed to the Institutional Review Board process for initiating clinical trials.

All CA-III rotating residents will gain experience in providing consultation. The resident will become experienced in teaching principles of pain management to other trainees and other health care professionals.

CA-III residents will participate in the planning and presentation of various conferences. Attendance will be mandatory for:

- 1) Pain Management daily subspecialty conference.
- 2) Pain Management weekly multidisciplinary conference.
- 3) Pain Management monthly Journal Review conference.
- 4) Pain Management monthly quality assurance conference.

The following textbooks are referenced or reviewed during the rotation:

- 1) Wall and Melzack: Textbook of Pain
- 2) Tollison: Handbook of Pain Management
- 3) Fenton: Image Guided Spine Interventions
- 4) Pain Center Core Curriculum Book (compiled by Dr. Srdjan S. Nedeljković)

The following periodicals are reviewed during the rotation:

- 1) Pain
- 2) Anesthesia and Analgesia
- 3) Anesthesiology
- 4) Regional Anesthesia

PAIN MANAGEMENT RESIDENT ROTATION (CA-III)

E. ADMINISTRATION

Residents at the CA-III level will gain a basic knowledge of the management of a pain center, such that they will understand how such a center is organized and run. Experience will be gained in:

- 1) Appointment and training of nonphysician personnel.
- 2) Establishing policies relating to management of pain problems.
- 3) Coordinating activities of the pain center with other health services.
- 4) Understand issues in quality improvement and program evaluation.

F. EVALUATION

Faculty will evaluate residents based on character skills, fund of knowledge, clinical competence, general medical skills, and specific skills in pain management. This will include both cognitive assessment and evaluation of technical skills. Feedback to the resident will occur at the conclusion of the rotation, and the evaluation will be submitted to the Residency Program Director to be included in the resident's general file.

SECTION 8

MISSION AND CURRICULUM STATEMENT

MISSION STATEMENT:

The mission of our Pain Management Educational program is to train fellows and residents to develop clinical skills in the management of all patients who suffer from painful conditions. The Pain Management Center at Brigham and Women's Hospital will provide its patients with the highest standard of care while setting exemplary standards in education of fellows and residents. Also, trainees will develop skills in teaching, administration, and in research, and will be able to function as respected consultants for other health care professionals in pain management.

PROGRAM EXPECTATIONS AS THEY RELATE TO COMPETENCIES

The Pain Management Center provides a comprehensive and diverse clinical training experience for the trainee, under the supervision of the PMC attending staff. The PMC provides various different services for outpatients and inpatients within Brigham and Women's Hospital, all under the direction of the Department of Anesthesia.

The PMC services fall under two broad categories: inpatient services and outpatient services. Residents participate in the outpatient services at the PMC.

1) Inpatient services

- a) Acute postoperative pain service
- b) Chronic inpatient pain service
- c) Cancer pain and symptom management service

2) Outpatient services

- a) Chronic pain evaluation clinic (new patients and follow-ups)
- b) Procedure clinic (with or without fluoroscopy/CT scan)
- c) Psychological services
- d) Psychiatry
- e) Neurology
- f) Oral and Facial Pain Clinic

SECTION 9

PROGRAM EXPECTATIONS AS THEY RELATE TO COMPETENCIES

Outpatient services:

- 1) Chronic pain evaluation clinic: The trainee (both residents and fellows) will learn how to establish a continuing clinical practice through the time they spend in the chronic pain evaluation clinic. Once an initial evaluation is done by a trainee, he or she will function as the physician with primary responsibility for that patient, with close supervision from the attending staff.

The model for the evaluation clinic is the typical office practice of an internist. Trainees will learn to obtain complete and comprehensive pain histories (including associated medical problems, psychiatric and social histories, and review of systems), perform physical exams (emphasizing the neurologic and musculoskeletal exam), and present the patient to the attending staff. The schedule is arranged so that the trainee can spend 15 minutes for follow-up patients and 45 minutes for initial evaluations. There are no more than two trainees per attending scheduled for the evaluation clinic.

Once the trainee sees a patient for initial evaluation, the trainee is the physician with primary responsibility for the patient. This system enables trainees to learn long-term patient management, with an emphasis on outcomes of various therapies employed. Administrative skills that are learned include patient scheduling, insurance preapproval, billing, and reimbursement issues. In addition, the trainee will become aware of office and support staff management, and learn time-management strategies and operating room coordination for procedures.

The trainee will learn to effectively function as a consultant as well as the primary care provider for the patient with chronic pain, and will communicate with various referring physicians. Also, the trainee will learn how to make appropriate referrals to physiatry, psychiatry, and other medical consultations. Trainees will be expected to assume a didactic role in the chronic pain clinic as well.

- 2) Procedure clinic: Outpatient procedures are performed by this service. Trainees are expected to become knowledgeable and competent in performing the full spectrum of procedures associated with the treatment of chronic pain. Trainees are expected to review the patient's history and then perform the necessary procedure with attending supervision. Appointments are typically planned for one-half hour to one hour, but occasionally, more time is given.

There are 2 procedure rooms with fluoroscopy services and three other rooms without X-ray equipment, where procedures that do not require fluoroscopy are done. Sedation can be given as necessary. Patients are scheduled to maximize follow-up care by the same trainee who previously evaluated the patient and determined the plan of action. In both procedure rooms, there is one staff assigned to each trainee. In the major procedure room, trainees will become knowledgeable in the use of the C-arm as well as in three-dimensional interpretation of fluoroscopic images and the use of radiocontrast dyes.

SECTION 9

MULTIDISCIPLINARY PAIN MANAGEMENT

GOALS:

The trainee will understand the organization and purpose of a multidisciplinary pain clinic. Also, the trainee will know the range of services that are provided at a multidisciplinary pain clinic. Fellows will be able to establish a multidisciplinary pain clinic by the conclusion of their training.

OBJECTIVES:

Trainees will understand and be able to discuss the following:

- 1) Common reasons for referral to a multidisciplinary pain clinic.
- 2) Range of services provided by multidisciplinary pain clinics.
- 3) Know why a multidisciplinary approach is valuable for patients with chronic pain.
- 4) Be familiar with outcome studies for treatment with multidisciplinary approach.
- 5) List the types and functions of health care professionals who work in a multidisciplinary pain clinic, and know what each contributes.
- 6) Be familiar with treatment plans, clinical issues, the evaluation process, and the staff involved.
- 7) Know the differences between an inpatient versus an outpatient pain management program.
- 8) Know how to institute a multidisciplinary pain clinic, specifically administrative issues such as: personnel, facilities, policies and practices, and financial issues.
- 9) Understand how multidisciplinary pain clinics interact with the medical community, with regards to issues of continuity of care, utilization of resources, and the use of consultants in evaluation and treatment of problems.
- 10) Be familiar with the costs of patient evaluation and treatment. Be aware how these costs compare with those for alternative treatment strategies.

INCLUDED REFERENCES:

- 1) Chapman S. Outpatient Chronic Pain Management Programs *in* Tollison CD, Satterthwaite JR, Tollison JW: Handbook of Pain Management, 2nd ed., Williams & Wilkins, Baltimore, 1994, p. 676-685.

ADDITIONAL REFERENCES:

- 1) Cohen, M.J. and Campbell, J.N. (Eds.), Pain Treatment Centers at a Crossroads, IASP Press, Seattle, in press.

- 2) Deyo, R.A., Practice variations, treatment fads, rising disability, *Spine*, 18 (1993) 2153-2162.
- 3) Flor, H., Frydrich, T. and Turk, D.C., Efficacy of multidisciplinary pain treatment centers: a meta-analytic review, *Pain*, 49 (1992) 221-230.
- 4) Fordyce, W.E., *Behavioral Methods for Chronic Pain and Illness*, Mosby-Year Book, St. Louis, 1976.
- 5) Ghia, J.N., Development and organization of pain centers. In: P.P. Raj (Ed.), *Practical Management of Pain*, 2nd ed., Mosby, St. Louis, 1992, pp. 16-39.
- 6) Loeser, J.D. and Egan, K.J., *Managing the Chronic Pain Patient: Theory and Practice at the University of Washington Multidisciplinary Pain Center*, Raven Press, New York, 1989.
- 7) Loeser, J.D., Seres, J. and Newman, R.I., Jr., Interdisciplinary multimodal management of chronic pain. In: J.J. Bonica (Ed.), *The Management of Pain*, 2nd ed., Lea and Febiger, Philadelphia, 1990, pp. 2107-2120.
- 8) Pilowski, I., The psychiatrist and the pain clinic, *Am. J. Psychiatry*, 133 (1976) 752-756.
- 9) Schwartz, D.P., Appropriate referral to inpatient vs. outpatient pain management programs: a clinician's guide, *Pain Digest*, 1(1991) 2-6.
- 10) Turk, D., Rudy, T.E. and Sorkin, B.A., Neglected topics in chronic pain treatment outcome studies: determination of success, *Pain* 53(1993)3-16.

SECTION 10

DIDACTIC CONFERENCES

Pain Management Center conferences are held on a regular schedule, as outlined on the attached “List of Conferences.” All trainees are required to attend conferences, and are required to present at least one didactic session each month. In addition, trainees present cases and prepare topics for interdisciplinary conference, and present topics during “Journal Review” in a didactic format.

Conferences include:

- 1) Subspecialty Pain Management lecture series: Mon/Tue/Thu (1 hr.)

Trainees attend all subspecialty conferences, and are required to prepare at least one conference per month.

- 2) Interdisciplinary Conference: Thursday (1 hr.)

Trainees present case studies and participate in this multidisciplinary conference.

- 3) Morbidity and mortality conference: first Thursday each month (1 hr.)

All trainees participate in quality assurance and present at morbidity and mortality conferences as the situation dictates.

- 4) Journal review: Fri (1 hr.), once per month

Discussion of journal articles primarily from “Pain,” “Anesthesiology,” “Anesthesia and Analgesia,” and “Regional Anesthesia and Pain Medicine,” presented by the trainee.

SECTION 11

LMR ACCESS, PRECIPPIO ACCESS, PMC NOTES, & DEA NUMBERS

LMR & Precipio Access:

LMR is used to write all notes including initial evaluations, follow-up notes, and procedure notes. Please make sure you have access to LMR prior to your rotation. If you do not have access, please e-mail both Monica Bynoe-Thompson and Diane Palombi. There are templates for procedure notes and one of the fellows can show you how to access the templates. Once you have completed your note, you will need to forward the note to the attending pain physician. A sample H&P is included in the appendix section of this handout.

Precipio is used to enter orders for imaging studies such as x-rays, MRIs, CT Scans, SPECT, etc. Please contact Diane Palombi to make sure you have access. Once you have ordered a study, print a copy of the order and give it to the patient. The patient can schedule this study along with their follow-up appointment prior to leaving the PMC. Typically, we prefer to see patients after they have gotten their imaging study, but confirm this with the attending physician.

PMCNotes is a folder located within SFA8. You should have access to this folder, but if you don't please ask Diane Palombi for access. This folder contains lots of useful information. The "Presentations" folder is a repository of many lectures given by attendings, fellows, and residents. You should try to review some of the presentations in this folder. This folder also contains a "Schedules" folder which has a copy of the Pain lecture schedule.

You will need your DEA number to write prescriptions in LMR. Contact Monica Bynoe-Thompson if your DEA number does not appear automatically when you print prescriptions. If it doesn't print automatically, you can write it in yourself.

SECTION 12

CHIEF OUTPATIENT FELLOW

There are two chiefs on any given month. One chief is the inpatient chief and the other is the outpatient chief. The outpatient chief will help orient you to the clinic. Any questions, problems, or concerns before your rotation or during should be directed to the outpatient chief. If there are issues that can't be resolved with the outpatient chief, you can contact Dr. Srdjan Nedeljković.

The outpatient chief will also assist in helping you gain a well-rounded experience during the clinic. After each clinic day, you will go over the next day's schedule and mutually decide what you need to gain more experience in. You will need to keep a procedure log and go over this log with the outpatient chief. The outpatient chief will also participate in your evaluation at the end of your rotation and will also assign the resident lectures.

SECTION 13

EVALUATION PROCESS

Evaluation of Trainees:

A mechanism is in place for the evaluation of Pain Management trainees and for providing feedback to them. After each resident completes his/her rotation in pain, the staff physicians and chief fellows are asked to complete an evaluation (form enclosed) for each trainee. The evaluation provides an assessment of the trainee's knowledge, judgment, and technical skills. Faculty discuss any performance issues in a group format, and these evaluations are either communicated to the trainee or forwarded to the departmental resident clinical competency committee in a timely manner by the fellowship director. Resident evaluations are then reviewed at the monthly meetings of the departmental Clinical Competency Committee, which is attending by the fellowship director. Staff meetings to discuss trainees are confidential.

Trainees are expected to be honest and ethical, reliable, learn from experience, react to situations in an appropriate manner, and have adequate cognitive and physical faculties. In addition, the trainee must show good character skills, intellectual skills, and motor and technical skills, especially with regards to complete management of acute, cancer, and chronic pain.

Trainees must obtain competency in the 6 areas as defined by the ACGME. These include patient care, medical knowledge, practice based learning and improvement, interpersonal and communication skills, professionalism, and system-based practice. Details about these items are provided elsewhere in this report. The program will define the knowledge, skills, and attitudes required and provide the educational experiences for trainees to demonstrate these skills.

The performance of trainees is evaluated on a daily basis and both positive feedback and advice for improvement are given concurrently. These assessments are used to improve resident performance. The standard "Trainee Evaluation Report" form is attached.

Evaluation of Faculty:

Trainees have the opportunity to evaluate faculty and provide feedback to the faculty. Faculty evaluations are distributed to trainees on a regular basis. All questionnaires are anonymous. Scores are reported back to each attending in order to improve the quality of teaching and education for the Pain Management Center's training program.

Program Evaluation:

The program uses feedback from residents and fellows in its evaluation of the educational effectiveness of the curriculum and the teaching experience of the trainees. A sample "Program Evaluation" form is enclosed. Also, periodic feedback is requested and obtained from residents and fellows in the program. Meetings are held within the Pain Center and also with departmental educational leaders to review and improve the resident and fellow teaching experience.

RESIDENT EVALUATION FORM

Resident: _____ Assignment: Pain Management Center Date: _____

Circle One: Daily/Monthly/Mid-month Month of Rotation: _____

Staff Contributing to Evaluation: _____

Key:

1 = Fell short of key expectations

3 = Met all expectations

5 = Best two of three residents this year

2 = Did not meet all expectations

4 = Exceeded expectations

ANY SCORE OTHER THAN "3" MUST BE FOLLOWED WITH COMMENTS

<u>Fund of Knowledge</u>	<u>Score</u>	<u>Comments</u>
1. Understands anatomy and physiology of pain	_____	_____
2. Understanding of pharmacology of analgesic drugs	_____	_____
3. Evaluation and assessment of patients	_____	_____
4. Collection and use of clinical data	_____	_____
5. Organization and synthesis of patient data	_____	_____

Application of pain medicine knowledge/clinical skills

1. Developing a pain management treatment plan	_____	_____
2. Understanding of psychological factors in pain	_____	_____
3. Problem solving and flexibility in patient management	_____	_____

Technical Skills

1. Epidural injections regional anesthetic techniques	_____	_____
2. Fluoroscopy and monitoring	_____	_____
3. Respecting patient comfort	_____	_____

Interpersonal skills/Personal attributes

1. Interactions with other members of the pain team	_____	_____
2. Communication with patients and families	_____	_____
3. Punctuality/preparedness in clinic	_____	_____
4. Teaching receptiveness and accepting criticism	_____	_____

- | | | |
|-------------------------------------------|-------|-------|
| 5. Recognizing limitations | _____ | _____ |
| 6. Demonstration of continued scholarship | _____ | _____ |
| 7. Reliable, conscientious, responsible | _____ | _____ |

Other

- | | | |
|-------------------------------------------------|-------|-------|
| 1. Documentation of patient care and follow up | _____ | _____ |
| 2. Reacts to stressful situations appropriately | _____ | _____ |
| 3. Conference attendance and presentations | _____ | _____ |

Was the progress discussed with resident mid-month Yes _____ No _____

Faculty comments:

What does this resident do well?

What can this resident do to improve?

Resident comments:

Signed: _____
Faculty

Signed: _____
Resident



Brigham & Women's Hospital
Pain Management Center
Harvard Medical School Teaching Affiliate



Patient Name:

Primary Care Physician:

Referring Physician:

BWH Pain Attending:

BWH Pain Fellow:

Chief Complaint:

Clinic Expectations:

Pain Score:

Active Problems List:

- 1.
- 2.

HPI:

Treatments:

1. Injections –
2. Physical Therapy –
3. Surgeries –
4. Medications –

Studies:

MRI:

EDX:

CT:

X-Ray:

The imaging studies above were reviewed in our clinic and with the patient.

Allergies:

PMH:

- 1.
- 2.
- 3.
- 4.

PSH:

- 1.
- 2.

Family History: Noncontributory

Social History:

Tob: None

EtOH: Denies

Illicit Drugs: Denies

Marital Status:
Children:
Education:
Occupation:
Disability:
Worker's Compensation:
Lawsuit:

Functional History:

Independent with ADLs and currently drives.

Medications:

- 1.
- 2.
- 3.

ROS: Denies HA, vision change, tinnitus, vertigo, fever, chills, cough, chest pain, palpitations, shortness of breath, heartburn, rash, nausea, vomiting, constipation, diarrhea, dysuria, bowel/bladder incontinence, weakness, recent fractures, tingling, or numbness. Comprehensive review of the other systems was negative as well.

Physical Exam:

Gen: WD/WN, awake, pleasant, in NAD.

HEENT: NC/AT, sclera anicteric, no conjunctival petechiae, MMM, oropharynx benign. No Lhermitte's sign.

Neck: Supple, no LAN, no bruits. JVP flat.

Chest: CTA bilaterally

CV: RRR with S1/S2

ABD: +BS all 4 quads. S/NT/ND. No masses, no HSM

EXT: Full distal pulses. No C/C/E.

Neuro Exam:

MS: AAOx3. Speech fluent without dysarthria, comprehension intact. Able to follow cross body commands. Repetition, naming, and simple calculations intact. Normal affect, logic, knowledge.

CN: I: not tested; II: VFF by confrontation; III, IV, VI: EOMI; V: sensation intact to LT and PP V₁, V₂, V₃ bilaterally; VII: Face symmetric; VIII: Intact to voice and finger rub; IX, X: Voice normal, palate elevates symmetrically, uvula midline XI: SCM/Trapezii 5/5; XII: Tongue midline, no atrophy or fasciculation

Motor: Normal bulk and tone, no tremor, rigidity or bradykinesia. Strength was 5/5 in the C5-T1 and L2-S1 myotomes bilaterally.

Sensory: LT/PP intact in the C5-T1 and L2-S1 dermatomes bilaterally. Vib/Temp/JPS intact.

Reflexes: No Hoffman's reflexes present. No glabellar, palmomental, snout, or grasp reflexes present.

C5	C6	C7	L4	S1	Toe	
2	2	2	2	2	↓↑	Left
2	2	2	2	2	↓↑	Right

Cerebellar: Rapid alternating movement, finger-nose-finger, heel-to-shin intact.

Gait: Able to walk on heels and toes.

MSK: No scoliosis or kyphosis on visual inspection. Good ROM of the shoulders without pain. No impingement signs. Spurling's maneuver was negative. Good lumbar/cervical ROM in extension, flexion, and lateral rotation. No paravertebral tenderness over the areas of the lumbar/cervical zygapophysial joints bilaterally. Lumbar/cervical facet loading maneuvers did not reproduce symptoms. SLR, seated SLR, and crossed SLR were negative. Femoral stretch was negative. Patrick's test was negative. Good internal and

external rotation of the hips. No paraspinal tenderness or palpable trigger points. No tenderness over the SI Joints bilaterally. Gaenslen's test was negative bilaterally.

Impression:

- 1.
- 2.
- 3.

Plan/Recs:

- 1.
- 2.
- 3.
- 4.

Please do not hesitate to call our clinic should you have any further questions. Dr. supervised or performed all the key portions of the history and physical exam and was in agreement with the treatment plan outlined above.

Paul Wang, D.O.
BWH Pain Fellow

MRI EXAMINATION QUICK REFERENCE SHEET

Verify patient identification, date of scan

STEP (1) T1 sagittals (spinal fluid is dark and fat is bright)

Determine left-right orientation. May not be labeled. On left, aorta gives off branches at ~L1; On right, renal artery runs posterior to IVC. Aorta is wider than IVC.

Working from caudal to rostral observe:

- *Neural foramina and nerve roots:* Observe for compression
- *Intervertebral discs:* width, protrusions/ herniations
- *Spinal column:* alignment (spondylolisthesis), vertebral body shape (compression fractures, Schmorls' nodes), posterior bony elements (spondylolysis), degenerative end plate changes (changes in fat content), hemangiomas.
- *Retroperitoneal space:* adenopathy, masses, great vessel aneurysm, etc

STEP (2) T2 sagittals (spinal fluid is bright)

Working from caudal to rostral observe:

- *Dural sac—cord and rootlets:* width, compression, irregularities
- *Intervertebral discs:* width, protrusions/ herniations, hydration, high intensity zones
- *Spinal column:* alignment (spondylolisthesis), vertebral body shape (compression fractures, Schmorls' nodes), posterior bony elements (spondylolysis), degenerative end plate changes (changes in fat content), hemangiomas.
- *Posterior bony elements:* breakage, listhesis, pseudo-articulations, etc.

STEP (3) T1 Axials (CSF appears gray and fat appears bright) Proceed sacral to rostral Orientation – neural foramina lie at level of discs.

- *Content of the spinal canal and neural foramina:* Trace course of nerve roots through neural foramina
- *Intervertebral discs— continuity, bulges, etc.*
- *Bone* – Vertebral bodies; spondylolisthesis, posterior bony elements (spondylolysis, breakage)
- *Ligamentum flavum:* thickened appearance, impingement
- *Retroperitoneal space:* adenopathy, masses, muscle, etc.

STEP (4) T2 Axials (spinal fluid appears bright) Work from sacrum to rostral

- *Content of the spinal canal and neural foramina:* Trace course of nerve roots through neural foramina
- *Intervertebral discs— continuity, bulges, etc.*
- *Bone* – Vertebral bodies; spondylolisthesis, posterior bony elements (spondylolysis, breakage)
- *Ligamentum flavum:* thickened appearance, impingement
- *Retroperitoneal space:* adenopathy, masses, muscle, etc.

STEP (5) **Assessment and Plan**

- *Assessment:* Ensure you have covered all structures. Assess need for other studies
- *Plan:* Patient care plan.