

Stony Brook University Hospital Department of Anesthesiology

Resident Primer for Pain Medicine Rotation

“If we could look into each other’s hearts and understand the unique challenges each of us faces, I think we would treat each other more gently, with more love, patience, tolerance, and care.”

- Marvin J. Ashton

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INTRODUCTION

The Pain Center at Stony Brook is comprised of the following practitioners:

Physicians:

Dr. Marco Palmieri - Director

Dr. Irina Lokshina

Dr. Minyi Tan

Dr. William Caldwell

Dr. Edward Papa

Patricia Tsui, Ph.D.

Nurse Practitioners:

Kathryn Scheriff

Julia Scheuermann

ROTATION RESPONSIBILITIES

Your primary responsibility for this rotation is to learn the basics of chronic pain management in an outpatient setting. This not only includes the physiology of pain, but the pharmacological, interventional, rehabilitative, psychological, and complementary techniques to improve the quality of life of a patient suffering from chronic pain.

The majority of your clinical services will be performed at The Center of Pain Management, located at the Cancer Center (3 Edmund D. Pellegrino Rd, Stony Brook, NY 11794). Arrive to the clinic at 8AM and familiarize yourself with the schedule. Introduce yourself to patients that you will be providing care to. Help facilitate the flow of patient care and get ready to help or do the procedures.

The hospital clinic is located at the Urology Office on 24 Technology Drive, East Setauket. Office hours are Monday and Thursday afternoons, from 1PM till 6PM. Residents are offered more independence as patients are often regularly scheduled during shorter duration.

At the first Wednesday of each month, there will be a journal discussion on a recent article related to chronic pain management. You will be expected to choose a relevant topic or short article to discuss using a 15-20 minute PowerPoint format presentation to the pain management staff.

EXPECTATIONS:

Week 1 - Follow attending for office visits and procedures to get a sense of the workflow. We understand that the last time you had a full conversation and did a full physical exam was during internship, if not medical school. Write the notes if you saw the patient and forward it to the respective attending.

Week 2 - Residents are expected to be able to develop a multimodal treatment plan for the patient. It does not need to be perfect, but it helps the attending in guiding you with your treatment plans. We don't expect you to a pain specialist on week 2. On procedure days, once you are comfortable with the flow of the procedures, you are expected to get more involved in doing the procedures.

Week 3 - Residents are expected develop better treatment plans for office visits. For procedures, residents should know how do bread and butter procedures.

Week 4- Residents should be able to do bread and butter procedures. You will take the Pain Rotation exam on your last day and go over the answers with Dr. Tan.

BASIC OF PAIN

It's important to classify pain because it provides information on the cause of the pain, as well as direction for an appropriate treatment regimen. Pain can be classified in many ways, and is defined as an *unpleasant sensory and emotional experience associated with actual or potential tissue damage* by the International Association of the Study of Pain.

Acute pain is defined as pain associated with injury and resolves with the normal process of healing of that injury. **Chronic pain** often persists longer than 3 months and does not resolve with the body's normal healing process.

Pain is communicated by nociceptors, which are the neurons that receptors that fire during noxious stimulation. These are either small a-delta myelinated or small c unmyelinated nerves in the periphery, and higher order neurons centrally. There is the gate theory of pain, which is based on the premise that signals in large nerve fibers, such as a beta, can inhibit small nociceptive nerve signaling. In physiologic conditions, the large nerve fibers inhibit pain signals, however if injured, this inhibition does not take place.

The neurophysiological classification of pain is based on the mechanism of pain signaling: nociceptive and non-nociceptive. Nociceptive pain is due to injury of pain sensitive area in the body and can be either somatic or visceral. Nociceptive pain of somatic origin is often characterized as an ache that is either sharp or dull in nature that is well localized. Examples include post surgical pain, arthritic pain, and musculoskeletal pain. Nociceptive pain of visceral origin, on the other hand, can be described as cramp-like and deep pain, and is characteristically more difficult to localize.

Non-nociceptive pain is neuropathic and psychogenic and can be either peripheral or central. Neuropathic pain is described as shooting, burning, electrical, and numb-like, and can be associated with allodynia. An example is complex regional pain syndrome or post herpetic neuralgia. Psychogenic pain is defined as pain in the setting when no nociceptive or neuropathic mechanism can be identified.

Pain can be primary, or secondary. Primary pain refers to pain being the disease. Examples include trigeminal neuralgia or migraine headache. Secondary pain is caused by another entity, such as tumor growth into a nerve plexus.

OPIOID CONVERSION

Opioid	IV (mg)	PO (mg)	Duration (hr)	Onset (min)	Peak (min)
Morphine	10	30	3-4	IM 15-30 IV <5 PO 15-60 SC 5-10	30-60 10-20 60 50-90
hydromorphone	1.5	7.5	3-4	IM 15-30 IV <5 PO 15-30	30-90 10-20 30-90
Oxycodone		20	3-4	PO 10-15	30-60
Hydrocodone		30	3-4	PO 10-20	30-60
Fentanyl	0.1		0.5-1	1-2	3-5

Morphine 300mg PO = 100 mg IV = 10 mg epidural = 1mg intrathecal