

# Elective: Orthopaedic Surgery; Spine

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## OVERVIEW

Welcome to the Section of Orthopaedic Surgery at Health Sciences Centre. Spinal surgery derives its origins from both orthopaedic surgery and neurosurgery. The training of a spine surgeon begins in medical school and is built upon by the residency program (orthopedics or neurosurgery) and further training achieved through a fellowship program.

Whether or not students are interested in spine surgery as a career, they will learn valuable skills on this rotation, which will be invaluable no matter the clinical pathway eventually chosen. At some time in almost all physicians' careers, they will be faced with patients with a spine problem. We believe that exposure to spine surgery as an important part of musculoskeletal medical education.

In order to derive the greatest benefit from this rotation and to gain an understanding of the wide spectrum of spinal pathologies in clinical practice, it is imperative that the students assume an active role, particularly in clinic, hospital ward and emergency room.

## INTRODUCTION

### Location(s):

Health Sciences Centre

### Preceptors:

### Attending Surgeons

Dr. Michael Goytan, Assistant Professor  
Dr. Michael Johnson, Assistant Professor

### Contact Person:

Michelle Elands, Program Administrator  
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## LEARNING OBJECTIVES (CanMEDS)

### Medical Expert

As Medical Experts, physicians integrate all of the CanMEDS Roles, applying medical knowledge, clinical skills and professional attitudes in their provision of patient-centered care.

Students will achieve the following:

- Develop a systematic approach obtaining a history and performing an examination of the spine patient, with particular emphasis on the neurologic exam

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- Develop an approach and competence in the reading and interpretation of x-rays, CT scan and MRI. Emphasis will be placed on the correlation of radiographic findings and the clinical presentation.
- Identify and manage common spinal pathologies (malignant, traumatic, degenerative)
- Identify spinal emergencies
- Assist in the assessment and management of elective and emergent spinal pathologies
- Recognize and manage common spinal perioperative complications (CSF leak, DVT, PE, infection, new neurologic deficit, etc.)
- Identify and manage common co-morbid medical problems associated with the spinal pathology
- Identify and manage common spinal pathologies (tumor, trauma, degenerative)
- Operating room conduct, including sterile technique and assisting.

### **Communicator**

Physicians effectively facilitate the doctor-patient relationship and the dynamic exchanges that occur before, during, and after the medical encounter.

As Communicators, students will facilitate the doctor-patient relationship:

- Establish rapport, trust and a therapeutic relationship with patients and families.
- Listen effectively.
- Elicit relevant information and perspectives of patients, families, and the health care team.
- Convey relevant information and explanations to patients, families and the health care team.
- Convey effective oral and written information about a medical encounter.
- Maintain clear, accurate, appropriate, and timely records of clinical encounters and operative procedures
- Address challenging communication issues effectively
  - Obtain informed consent
  - Deliver bad news
  - Disclose adverse events
  - Discuss end-of-life care
  - Discuss organ donation
- Addressing anger, confusion and misunderstanding using a patient centered approach

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## **Collaborator**

Physicians effectively work within a healthcare team to achieve optimal patient care.

As Collaborators, students will work effectively within the surgical team to achieve optimal patient care:

- Demonstrate a team approach to health care
- Participate effectively in an interprofessional and interdisciplinary health care team.
- Recognize and respect the diversity of roles, responsibilities, and competences of other health professionals in the management of the surgical patient.
- Work with others to assess, plan, provide, and integrate care of the surgical patient.

## **Leader**

Physicians engage with others to contribute to a vision of a high-quality health care system and take responsibility for the delivery of excellent patient care through their activities as clinicians, administrators, scholars, or teachers.

As Leaders, students will participate in the activities of the surgical service, making decisions, allocating resources, and contributing to the effectiveness of the health care team:

- Employ information technology appropriately for patient care.
- Allocate finite health care resources

## **Health Advocate**

Physicians responsibly use their expertise and influence to advance the health and well-being of individual patients, communities and populations.

As Health Advocates, students will responsibly use their expertise and influence to advance the health and well-being of individual patients, communities and populations:

- Concern for the best interest of patients
- Identifying health needs of individual patients, and advocate for the patient in cases where appropriate
- Promote and participate in patient safety

## **Scholar**

Physicians demonstrate a lifelong commitment to reflective learning, as well as the creation, dissemination, application and translation of medical knowledge.

As Scholars, students will demonstrate a lifelong commitment to learning:

- Demonstrate the ability for continuing self-learning
- Discuss the principles of surgery and the application of basic sciences to surgical treatment.
- Demonstrate appropriate presentation skills, including formal and informal presentations.

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- Critically evaluate medical information and its sources and apply this appropriately to clinical decisions.
- Critically appraise the evidence in order to address a clinical question.
- Integrate critical appraisal conclusions into clinical care.

## Professional

As Professionals, physicians are committed to the health and well-being of individuals and society through ethical practice, profession-led regulation, and high personal standards of behaviour.

As Professionals, students are committed to health and well-being of individuals through ethical practice, profession-led regulation and high personal standards of behavior:

- Exhibit professional behaviors in practice, including honesty, integrity, commitment, compassion, respect and altruism.
- Demonstrate a commitment to delivering the highest quality care.
- Recognize and respond appropriately to ethical issues encountered in practice.
- Recognize and respect patient confidentiality, privacy and autonomy.
- Participation in peer review
- Manage conflicts of interest
- Maintain appropriate relations with patients.
- Demonstrate awareness of industry influence on medical training and practice
- Recognition of personal and clinical limitations

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## INFORMATION

*These are locations, readings, evaluations, call responsibilities, etc.*

## Required Reading

[http://emedicine.medscape.com/orthopedic\\_surgery](http://emedicine.medscape.com/orthopedic_surgery)

Campbell's Operative Orthopaedics

Journal of the American Academy of Orthopaedic Surgeons

Instructional Course Lectures

A Guide to Physical Examination and History-Taking (Bates)

Musculoskeletal Examination (Hawkins)

## Useful Links

[Canadian Spine Society](#)

[Scoliosis Research Society](#)

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[North American Spine Society](#)  
[Cervical Spine Research Society](#)

## Teaching Unit

The teaching unit is located on GD2, Health Sciences Centre

## Call Responsibilities

1-in-4  
Call from home.

## Evaluations

An exit interview should be set up at the beginning of the rotation so that student evaluations may be completed.

Service evaluation by student to be handed in at the end of your rotation.

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## WARD ACTIVITIES

*These are examples of schedules, expectations, rotation details, etc. All the details below are subject to change.*

### Expectations

- Attend morning rounds, make notes and orders on charts (under supervision)
- Take calls from the ward and the ER
- See patients in the ER and participate in their initial management
- Attend clinics
- Attend & assist at surgery

Students must be enthusiastic, vigilant and proactive in their participation. They should take advantage of the busy service by seeking opportunities to care for patients. There are ample opportunities to be involved. They will work alongside the staff and residents who will help guide the student through cases. They should read around common cases and related topics.

At the end of the rotation, we welcome any constructive criticism to help make the experience beneficial.

### Service Rounds

Spine Rounds  
Time - Friday AM  
Location - AD4