

Elective Description

Campus: All Campus (Fargo)

Department: Surgery

Elective/Experience Title: Pediatric Orthopedic Surgery

Course Number: SURG 9502

Location of Elective: Sanford Orthopedics and Sports Medicine – Fargo, ND

Preceptor(s): Brian Saur, MD & Mohammed Waseemuddin, MD

Period(s) Offered: All periods

Course Prerequisites: Completion of Surgery Clerkship

Number of students per period: 1 student per period

Revised Curriculum Phase(s): 2 & 3

Purpose: To provide education and experience in the diagnosis and care of pediatric patients requiring orthopedic surgery services.

Objectives: Following successful completion of this elective, the student will be able to:

1. Demonstrate knowledge of the pathophysiology related to pediatric orthopedic problems to include the pediatric septic hip, developmental dysplasia of the hip, pediatric elbow fractures, fractures involving the physis, scoliosis of the spine, and talipes equinovarus. (SMHS Competencies 2.1, 2.2)
2. Demonstrate the ability to evaluate and order appropriate initial imaging/laboratory studies for common pediatric orthopedic presentations including: the limping child, lower extremity deformities (intoeing, bowlegs, etc), traumatic injuries. (Year 4 Objectives 2, 4, 14; SMHS Competencies 2.5, 2.7, 3.2, 3.3)
3. Demonstrate knowledge of the anatomy associated with the pediatric septic hip, developmental dysplasia of the hip, pediatric elbow fractures, the osseous physis, scoliosis and talipes equinovarus. (2.3)
4. Correlate anatomy to imaging findings on basic imaging studies for the pediatric septic hip, developmental dysplasia of the hip, pediatric elbow fractures, fractures involving the physis, scoliosis of the spine and talipes equinovarus. (Year 4 Objective 4; SMHS Competencies 2.3, 2.5, 3.3)
5. Demonstrate knowledge of non-operative treatment options and surgical indications for the common pediatric orthopedic conditions. (e.g., safe casting and splinting principles to minimize risk of compartment syndrome or vascular insufficiency) (Year 4 Objective 14; SMHS Competencies 2.7, 3.4)
6. Demonstrate under supervision the ability to place appropriate splinting, cast and remove casts for common pediatric orthopedic conditions. (SMHS Competency 3.6)
7. Obtain a complete history and basic physical examination of the pediatric orthopedic patient (including patients with pediatric septic hip, developmental dysplasia of the hip, pediatric elbow fractures, the osseous physis injury, scoliosis and talipes equinovarus). (Year 4 Objective 1; SMHS Competency 3.1)
8. Provide, under supervision, basic peri-operative management of the pediatric orthopedic patient. (Year 4 Objective 14; 3.4)
9. Describe potential complications associated with the treatment of the common pediatric orthopedic conditions. (Year 4 Objective 14; SMHS Competencies 2.1, 2.5)

Instructional Activities: During this elective, the student will be involved in/experience:

1. Participating in the care of pediatric orthopedic patients including taking histories and performing physical exams, ordering initial imaging and laboratory studies and forming management plans.
2. Review imaging studies evaluating pediatric orthopedic patients.
3. The student will spend 3 days per week in the outpatient clinic and 2 days per week in the operating room. Call will be available to interested students on an elective basis.
4. The student will be required to create brief oral presentations on common pediatric orthopedic conditions.

Criteria for Grading: During and following this elective, the preceptor will:

1. Evaluate by direct observation the student's capability to take thorough histories, perform orthopedic examinations, and propose management strategies including perioperative management and discuss complications of these options. (Objectives 4, 5, 6, 7, 8, 9)
2. Evaluate by direct observation the performance of basic pediatric orthopedic examination, the quality of the student's oral presentations, and the ability to critically analyze and diagnose pediatric orthopedic conditions. (Objective 7)
3. Evaluate by discussion the student's knowledge gained from assigned readings including pathophysiology and anatomy of common orthopedic problems (Objectives 1,2).
4. Evaluate by direct observation the student's ability to correlate anatomic findings with imaging studies for pediatric orthopedic diagnoses (objective 3).
5. Evaluate by direct observation and input from healthcare team members the student's attitude, behavior, professional appearance, and intellectual curiosity.
6. Utilize the standardized UNDSMHS senior elective form.