

## ROTATION SUMMARY PEDIATRIC SPORTS MEDICINE

### Rotation Contacts and Scheduling Details

**Rotation Director:** James Gamble, M.D.

**Administrator:** Karen Gleason    phone: 650-721-7638  
Patty Siordia                    phone: 650-723-5286

**Positions Available:** the optimal number of pediatric residents per month is 1 but up to 2 pediatric residents may be accepted with advance notice. You may schedule either a 2 or 4 week block.

### Introduction

During the course of the pediatrics sports medicine and orthopedics rotation, you will participate in a variety of clinics representing the range of this specialty. You will develop familiarity with common sports injuries and their management, the evaluation of back pain and spine injuries, and the care of congenital orthopedic abnormalities.

### Weekly Schedule

There are varied training opportunities available to you during this rotation and you may tailor this general schedule to your own training goals and interests.

Time	Monday	Tuesday	Wednesday	Thursday	Friday
<b>0800-0830</b>	Morning Report	Morning Report	Morning Report	Morning Report	<b>0800-0900</b> Grand Rounds
<b>0830-1200</b>	Orthopedics Clinic 730 Welch Road Ground Floor	Orthopedics Clinic 730 Welch Road Ground Floor	Independent Reading <b>1000-1130</b> Pediatric Orthopedic X-Ray Rounds	Orthopedics Clinic 730 Welch Road Ground Floor	
<b>1200-1300</b>	Noon Conference	Noon Conference	Noon Conference	Noon Conference	Noon Conference
<b>1300-1700</b>	Independent Reading	Orthopedics Clinic 730 Welch Road Ground Floor	Orthopedics Clinic 730 Welch Road Ground Floor	Orthopedics Clinic 730 Welch Road Ground Floor	Variable (Typically Independent Reading)

### Rotation Specifics

#### Orientation

Residents should review the rotation summary and goals and objectives prior to the start of the rotation. And orientation to the clinic (see below) will occur on the first day of the rotation at the start of clinic.

#### Clinic Overview

The orthopedic nurse practitioner, Dominka Maglasange, will orient you to the orthopedics clinic on your first morning. Please introduce yourself to the faculty and ensure they know it is your first day.

- The clinic schedule is available at the start of each clinic day. Residents should review this list and identify the patients they would like to see.
- The resident is expected to take the history and perform the physical examination of the patient. S/he will then present the case to an attending, including the resident's assessment and plan. The resident will then collaborate with the attending for the remainder of the visit, focusing on confirmation of physical examination techniques, establishment of final assessment and plan.
- The resident is responsible for completing a clinic note dictation on patients s/he has seen. These dictations are best done following each visit before moving on to the next patient.

### Resident Roles and Responsibilities

Residents are expected to attend all clinics except those that overlap with continuity clinic, dictate clinic visits (as above), and perform any necessary patient follow-up (or sign this out to another care provider). Any absences must be communicated to Dr. Gamble – and approval obtained for the absence - as soon as they are anticipated.

During independent reading time, residents may write up a case seen in clinic as a learning tool for other residents (this should be reviewed upon completion with Dr. Gamble who will submit it to the pediatrics program for posting

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under rotation resources), draft a pre-and-post rotation self-assessment quiz (again, any such questions should be reviewed for accuracy and relevance with Dr. Gamble then may be submitted for inclusion on the website), or review articles, texts, or conference presentations provided under Recommended Reading for Sports Medicine on [peds.stanford.edu](http://peds.stanford.edu). Feel free to identify your own learning resources as well.

### **Evaluation and Feedback**

Residents are responsible for soliciting verbal feedback from faculty following patient encounters and daily clinics. It is helpful to ask specific questions regarding skills you are working on developing.

Residents are expected to maintain a list of faculty with whom they worked during the rotation and provide this to Michelle Rennels [mrennels@lpch.org](mailto:mrennels@lpch.org) at the close of the rotation. Reciprocal evaluation requests will then be submitted to those faculty and to the resident.



## Goals and Objectives Pediatric Sports Medicine

### ACGME Competency Based Goals and Objectives

#### Goal 1. Develop skills in the complete musculoskeletal examination

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Identify the following landmarks associated with the shoulder, elbow, back, knee, and ankle <ul style="list-style-type: none"> <li>• Shoulder               <ul style="list-style-type: none"> <li>- AC joint</li> <li>- Bicipital groove</li> <li>- Rotator cuff insertion</li> </ul> </li> <li>• Elbow               <ul style="list-style-type: none"> <li>- Radial neck</li> <li>- Ulnar styloid</li> <li>- Radial styloid</li> </ul> </li> <li>• Hand               <ul style="list-style-type: none"> <li>- Scaphoid</li> </ul> </li> <li>• Knee               <ul style="list-style-type: none"> <li>- Tibial tuberosity</li> <li>- Joint line</li> </ul> </li> <li>• Ankle               <ul style="list-style-type: none"> <li>- Malleoli</li> <li>- ATFL</li> <li>- PTFL</li> <li>- Calcaneofibular ligament</li> <li>- Deltoid ligament</li> <li>- Syndesmosis</li> </ul> </li> </ul> (PGY1, 2, 3)	<ul style="list-style-type: none"> <li>• Modeling of physical examination by attending</li> <li>• Independent anatomy review</li> </ul>	<ul style="list-style-type: none"> <li>• Attending's direct observation of physical examination by resident</li> </ul>	MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
2. Demonstrate and/or describe the following physical examination techniques <ul style="list-style-type: none"> <li>• Shoulder               <ul style="list-style-type: none"> <li>- ROM</li> <li>- Stability tests</li> <li>- Rotator cuff evaluation</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Modeling of physical examination by attending</li> <li>• Independent reading</li> </ul>	<ul style="list-style-type: none"> <li>• Attending's direct observation of physical examination by resident</li> </ul>	PC - <i>Provide effective health care services</i> MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>

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- Elbow
    - ROM
    - Stability tests
  - Knee
    - ROM
    - Anterior drawer
    - Posterior drawer
    - Lachman
    - Varus, valgus instability
    - Patellar apprehension test
  - Ankle
    - ROM
    - Anterior drawer
    - Squeeze test

(PGY 1, 2, 3)

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3. Discuss the dysfunction suggested by abnormal findings in the following examinations or historical features

- Shoulder
  - Anterior instability
  - Rotator cuff abnormality
- Elbow
  - Restricted supination or pronation
  - Restricted flexion or extension
- Knee
  - Patellar apprehension test
  - Knee locking
  - Knee popping with squatting
  - Subjective knee instability

(PGY 1, 2, 3)

- Beside teaching by the attending in clinic
- Independent reading

- Resident presentations of patient visits to attending in clinic

PC - *Provide effective health care services*  
 MK - *Demonstrate knowledge evolving sciences and apply this knowledge to patient care*

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4. Demonstrate effective communication about orthopedic injuries by accurately employing the following terminology related to the musculoskeletal system

- Sprain

- Modeling by attending

- Resident presentations of patient visits to attending in clinic

ICS - *Communicate effectively with physicians, other health professionals, and health related agencies*  
 PC - *Provide effective health care services*

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- Strain
  - Stress fracture
  - Overuse syndromes
- (PGY 1, 2, 3)

5. Include assessment of neurovascular status in all extremity examinations (PGY 1, 2, 3)	• Modeling of physical examination by attending	• Attending's direct observation of physical examination by resident	PC - <i>Provide effective health care services</i>
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### Goal 2. Appropriately employ and accurately interpret musculoskeletal imaging studies

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Identify cases in which an x-ray would help establish a diagnosis (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• X-ray rounds</li> <li>• Review of x-rays in clinic</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> <li>• Discussion during x-ray rounds</li> </ul>	PC - <i>Provide effective health care services</i>
2. Identify cases in which MRI would help establish a diagnosis (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• X-ray rounds</li> <li>• Review of x-rays in clinic</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> <li>• Discussion during x-ray rounds</li> </ul>	PC - <i>Provide effective health care services</i>
3. Identify cases in which a CT scan would help establish a diagnosis (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• X-ray rounds</li> <li>• Review of x-rays in clinic</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> <li>• Discussion during x-ray rounds</li> </ul>	PC - <i>Provide effective health care services</i>

### Goal 3. Develop skills in the evaluation and treatment of overuse injuries in pediatrics

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Characterize the following common pediatrics sports-related injuries: <ul style="list-style-type: none"> <li>• Osgood Schlatter</li> <li>• Little League Elbow</li> <li>• Stress fractures</li> </ul> (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Independent reading</li> <li>• Beside teaching by the attending in clinic</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>

### Goal 4. Develop skills in the evaluation and discussion of acute orthopedic injuries

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Characterize the following pediatric fractures <ul style="list-style-type: none"> <li>• Jones (location, etc)</li> <li>• Greenstick</li> <li>• Buckle</li> </ul> (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Independent reading</li> <li>• Beside teaching by the attending in clinic</li> </ul>	<ul style="list-style-type: none"> <li>• Attending observation of resident in the context of patient care</li> <li>•</li> </ul>	PC - <i>Provide effective health care services</i> MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
2. Demonstrate effective communication about fractures by developing an understanding of the following terms	<ul style="list-style-type: none"> <li>• Modeling by attending</li> </ul>	<ul style="list-style-type: none"> <li>• Resident presentations of patient visits to attending</li> </ul>	ICS - <i>Communicate effectively with physicians, other health professionals, and health related agencies</i> PC - <i>Provide effective health care</i>

- Comminuted
  - Displaced
  - Angulated
  - Impacted
  - Open vs closed
- (PGY 1, 2, 3)

*services*

**Goal 5. Develop skills in the identification of anatomical differences that may predispose to pain, disability, or injury**

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Demonstrate the ability to assess knee alignment (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Modeling by attending</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	PC - <i>Provide effective health care services</i> MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
2. Demonstrate the ability to assess strength, including core and focal strength (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Modeling by attending</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	PC - <i>Provide effective health care services</i> MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>
3. Discuss the possible implications of high arched feet and when orthotics are indicated (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Independent reading</li> <li>• Beside teaching by the attending in clinic</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	PC - <i>Provide effective health care services</i> MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i>

**Goal 6. Develop an understanding of the application of therapeutic modalities in orthopedic injuries**

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Counsel patients on the role of rest, ice, compression, elevation, and NSAIDs in healing (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Modeling of physical examination by attending</li> <li>• Patient care</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	PC - <i>Provide effective health care services</i>
2. Identify the cast or splint appropriate for a given injury, employing the following considerations <ul style="list-style-type: none"> <li>• Timing of cast application relative to injury and risk of swelling</li> <li>• Immobilization of joint above and below</li> </ul>	<ul style="list-style-type: none"> <li>• Formulation of care plan in collaboration with attending</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	PC - <i>Provide effective health care services</i>

- Timing of ROM in applicable conditions  
(PGY 1, 2, 3)

**Goal 7. Collaborate with other disciplines as necessary in the care of the pediatric patient with an orthopedic condition**

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Describe the role of a physical therapist (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Patient care</li> <li>• Establishment of patient care plan with attending input</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of patient care plan with attending</li> </ul>	<p>SBP - <i>Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources</i></p> <p>ICS - <i>Communicate effectively with physicians, other health professionals, and health related agencies</i></p>
2. Describe the role of an occupational therapist (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Patient care</li> <li>• Establishment of patient care plan with attending input</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of patient care plan with attending</li> </ul>	<p>SBP - <i>Know how types of medical practice and delivery systems differ from one another, including methods of controlling health care costs and allocating resources</i></p> <p>ICS - <i>Communicate effectively with physicians, other health professionals, and health related agencies</i></p>

**Goal 8. Develop skills in history taking related to orthopedic complaints**

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. List the mechanisms of injury that raise suspicion for major knee ligament damage (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Beside teaching by the attending in clinic</li> <li>• Independent reading</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	<p>MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i></p>
2. List historical characteristics that suggest patellar dislocation (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Beside teaching by the attending in clinic</li> <li>• Independent reading</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	<p>MK - <i>Demonstrate an investigatory and analytic thinking approach to clinical situations</i></p>
3. List the historical symptoms that suggest meniscal tear (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Beside teaching by the attending in clinic</li> <li>• Independent reading</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	<p>MK - <i>Demonstrate an investigatory and analytic thinking approach to clinical situations</i></p>
4. List the mechanisms of injury that raise suspicion for AC separation (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Beside teaching by the attending in clinic</li> <li>• Independent reading</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	<p>MK - <i>Demonstrate an investigatory and analytic thinking approach to clinical situations</i></p>

**Goal 9. Demonstrate facility in tailoring the orthopedic examination to the age and developmental stage of the patient**

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Employ observation, play, coaxing, and partnership with parents to the evaluation of non-verbal children (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Observation of the attending in the context of patient care</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	<p><i>P - Demonstrate sensitivity and responsiveness to patients' culture, age, gender and disabilities</i></p> <p><i>PC - Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families</i></p>

**Goal 10. Act as a patient advocate by assisting patients in the coordination of referrals to ancillary services and inform the patients' primary care provider of assessment and ongoing care needed for the patient's condition**

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Include in consult dictations information for the referring physician regarding continued monitoring and conditions for intervention (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Clinic dictations with attending feedback</li> </ul>	<ul style="list-style-type: none"> <li>• Attending review of resident dictations</li> </ul>	<p><i>ICS - Communicate effectively with physicians, other health professionals, and health related agencies</i></p>

**Goal 11. Develop familiarity with congenital or acquired conditions that may require orthopedics consultation**

Resident Objectives	Instructional Strategies	Assessment of Competence	ACGME Competency Goals
1. Distinguish between club foot and metatarsus adductus (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Independent reading</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	<p><i>MK - Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i></p>
2. State the management options for club foot (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Independent reading</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	<p><i>PC - Provide effective health care services</i></p>
3. List risk factors for congenital hip dysplasia (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Independent reading (<a href="http://aappolicy.aappublications.org/cgi/reprint/pediatrics;105/4/896.pdf">http://aappolicy.aappublications.org/cgi/reprint/pediatrics;105/4/896.pdf</a>)</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	<p><i>MK - Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i></p>
4. List the imaging options for suspected congenital hip dysplasia (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Patient care</li> <li>• Independent reading (<a href="http://aappolicy.aappublications.org/cgi/reprint/pediatrics;105/4/896.pdf">http://aappolicy.aappublications.org/cgi/reprint/pediatrics;105/4/896.pdf</a>)</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	<p><i>PC - Provide effective health care services</i></p>

5. State the management options for congenital hip dysplasia (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Patient care</li> <li>• Independent reading (<a href="http://aappolicy.aappublications.org/cgi/reprint/pediatrics;105/4/896.pdf">http://aappolicy.aappublications.org/cgi/reprint/pediatrics;105/4/896.pdf</a>)</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	PC - <i>Provide effective health care services</i>
6. Discuss the radiographic and physical examination assessments in scoliosis (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Independent reading (<a href="http://www.ejbs.org/cgi/content/full/90/1/195">www.ejbs.org/cgi/content/full/90/1/195</a>)</li> <li>• Patient care</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i> PC - <i>Perform competently all medical and invasive procedures considered essential for the area of practice</i>
7. Discuss patient characteristics and scoliosis severity that indicates need for close monitoring and what that monitoring should be, as well as indications for intervention/referral (PGY 1, 2, 3)	<ul style="list-style-type: none"> <li>• Independent reading (<a href="http://www.ejbs.org/cgi/content/full/90/1/195">www.ejbs.org/cgi/content/full/90/1/195</a>)</li> <li>• Patient care</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation in the context of patient care</li> </ul>	MK - <i>Demonstrate knowledge evolving sciences and apply this knowledge to patient care</i> PC - <i>Provide effective health care services</i>

PBLI = practice based learning and improvement

ICS = interpersonal and communication skills

P = professionalism

MK = medical knowledge

PC = patient care

SBP = systems based practice