**Pediatric Fractures**

**Instructor Guide**

**BACKGROUND:** Emergency physicians frequently see pediatric patients with fractures. Not all pediatric fractures are the same, and it is important to understand the (often subtle) differences in order to recognize the proper emergency department intervention and determine the best disposition for the child.

In addition, emergency physicians are uniquely poised to perform medical coverage for events and athletic teams, including youth athletic competitions. As such, they may see a patient in the field, rather than in the more familiar hospital setting. This provides an opportunity to encounter pathology, some of which rarely arrives in the ED.

**PURPOSE & GOALS:** In this module the goal is to cover common types of fractures unique to skeletally-immature patients and their initial treatment and ultimate disposition. Topics included are:

* Pediatric ossification patterns
* Salter-Harris fractures
* Greenstick fractures
* Torus (Buckle) fractures
* Apophyseal avulsion fractures
* Mid-shaft clavicle fractures
* Supracondylar humerus fractures
* Tibial tubercle

**EDUCATIONAL OBJECTIVES:**

1. List the age of the primary ossification centers in the elbow
2. Identify the common pediatric fracture patterns
3. Describe the treatment of fractures in the pediatric population
4. Name the common complications of pediatric fracture patterns

**RESOURCE FILES:**

1. PowerPoint Presentation

-This can be presented if a traditional didactics format is desired. This is best suited for a large group didactics format. It is intended to be an interactive presentation with prompts and talking points included in the “comments” box.

2. Interactive Cases

- Working through these cases is an alternative format for presenting this material. This is better suited to a small group setting rather than a large lecture audience.

1. Summary Handout

-This document summarizes and condenses the critical information for the session. It is intended to be a resource for instructors and learners alike. It can be used as material for review prior to the session, reference material during the session, or as a resource for trainees to keep after the session.

4. Pre/Post Quiz

-These questions can be given before and after the session to track learning and to augment pre work.

-Answers: 1: A, 2: C, 3: D, 4: A

**TOTAL MODULE DURATION:**

Material can be presented two ways:

-PowerPoint presentation (90 minutes)

 -Best suited for large lecture-style didactics

-Case discussion (60 minutes)

 -Best suited for small group format

**REQUIRED RESOURCES:**

-Virtual (remote platform such as Zoom, Teams, WebEx, Skype) or in-person (computer and projector) platform for presenting the electronic course material

-Method for distributing the pre/post quiz and the summary handout (print versus electronic)

**DESCRIPTION OF MODULE:**

Intended Audience

-This curriculum is best suited to a senior medical student or resident-level learner, although it would also be relevant for a Primary Care Sports Medicine fellow.

**Pre-reading:**

* [www.Orthobullets.com](http://www.orthobullets.com)(injury topics listed above)
* Rang’s Children’s Fractures, current edition, D. Wenger and M. Pring (Eds.)

Recommended implementation/timeline

• Pre-module

 -learner should complete the pre-readings and take the pre-quiz

• During the module

 -The material can be delivered by one of two formats:

 -interactive PowerPoint presentation

 -best for larger audience

 -case-based discussion

-best for groups of 4 or fewer learners per group

 -15-20 minutes per case

 -at the conclusion of the session, learners should take the quiz again and be provided with

the summary handout in electronic or hard-copy format