

**Simulation Curriculum
Procedure Workshop
Lumbar Puncture
Monthly**

Goals:

To teach procedural competency requiring skilled techniques and specialized physical examination with the ultimate goal to provide effective clinical instruction and improved patient care.

Objectives:

The learner should:

1. understand the **indications** for lumbar puncture
2. understand and recognize the possible **serious adverse effects**.
3. be familiar with the basic **anatomical landmarks** in the procedure and the function of the procedural equipment.
4. be able to demonstrate the **basic approach and technique** to the procedure.
5. receive appropriate **feedback** from the instructor on their performance.
6. Demonstrate communication skills and professionalism in a team setting.

Participants:

PGY-1 residents (Transitional Year/GTU/GW/Dewitt)
Acting Interns (GW/GTU/VCU)

Instructors:

Two Internal Medicine Faculty Members

Activity:

- **Pre-testing** to evaluate medical knowledge
- **Educational Video (15 min)**
This video demonstrates the techniques for lumbar puncture. There is a review of the indications and contraindications for the procedure. There is a description of the prepackaged catheter-insertion kit including all the basic equipment and their function. And finally, there is a basic anatomical overview of the subclavian vein and the techniques used for access at the bedside.

Lumbar Puncture, Videos in Clinical Medicine, www.NEJM.org

- **Procedure Workshop (1.5-2hr)**
This is a group exercise where the skills are reviewed on a model in the VCU simcenter. There will be a brief overview of sterile technique and use of the equipment in the lumbar puncture kit. Each learner will be able to practice lumbar puncture using the techniques observed in the video and by the instructor with direct feedback during the session. The learners will also participate in instructing their team members with emphasis on communication and team work skills.

- **Feedback Session and Review of Literature**

Learner feedback is provided to the group with emphasis on the objectives described. The learners are provided with a handout which summarizes the basic principles and techniques emphasized in the workshop.

- **Post-test** evaluation

References:

Lumbar Puncture N Engl J Med 2006;355:e12.

HCT before lumbar puncture in suspected bacterial meningitis N Engl J Med 345:1727, December 13, 2001

When to do a Lumbar Puncture Arch. Dis. Child. 2002;87;235-237