Course: Clinical Toxicology (EM 1621)

Department: Surgery, Division of Emergency Medicine, Section of Toxicology

Course: Clinical Toxicology (16-21)

Faculty Coordinator: Kurt Kleinschmidt, M.D.

Contact Person: Misti Marshall (misti.marshall@utsouthwestern.edu)

Hospital: Parkland Health & Hospital System & Children’s Medical Center

Periods offered: All

Length: 4 weeks

Max. No. of students: 4 per block. May consider more, but requires approval from Dr. Kleinschmidt (Contact the Program Coordinator to do so). The Fall is a busy time and the rotation is generally full.

Under special circumstances, rotation may be taken prior to end of the 3rd year with approval from Dr. Kleinschmidt.

I. Course Objectives

At the conclusion of this rotation, the student should be able to:

a. State the indications for gastric emptying, charcoal, multi-bowel charcoal, and whole bowel irrigation.

b. Describe the risks and the benefits of those above procedures/agents.

c. Describe key clinical and pharmacologic points about the evaluation and management of exposures to acetaminophen, salicylates, anti-depressants, anti-psychotics, anti-seizure meds, and sedative hypnotics.

d. Describe the classic toxidromes.

e. State the indication for antidotes including flumazenil, N-Acetyl Cysteine, & narcan.

f. Use clinical laboratory results to assess patients with toxicologic problems.

g. Describe the role of the Poison Control Center in poison prevention, poison information, and toxicological consultation; and the role of the clinical toxicologist.

h. Discuss the appropriate selection and institution of invasive extracorporeal elimination procedures such as hemodialysis in overdose patients.

i. Perform, at a more comfortable level, a topic review before a small group of health care professionals, which includes the other rotators on service at the same time.

II. Methods of Instruction:

A. Didactic
1. Attending and Fellows Rounds. These occur Monday-Friday in the mornings. Focuses on cases of poisoned patients who were called into the North Texas Poison Center. Rotators are involved in performing follow-up calls, doing book and literature reviews of topics pertinent to their cases, and discussion of cases during Fellows and Attending Rounds. Faculty for Conferences will be Medical Toxicology Fellows, Medical Toxicologists, and Doctors of Pharmacy.


3. Wednesday Conference Series. Occurs each week from Noon-4 p.m. Standing series of reviews of various texts, journal club, picture project, core competency review, and rotator presentations.

4. Other standard UTSW conferences. Attendance with the Fellows at the UTSW monthly Ethics and Professionalism Grand Rounds and the UTSW Clinical Teaching series done 1-2 hours per month from the Fall until the Spring.

5. Performance of special projects including obtaining and presenting information for the Picture Project and answering questions assigned to them during rounds.

B. Clinical

1. Clinical teaching for the rotation will come from the Medical Toxicology Fellows and Attending Staff. When poisoned or envenomated patients are located in Parkland Memorial Hospital or Children’s Medical Center, rotators accompany the Fellows and/or Attending staff to do bedside rounds; wherever the patient is located. Many of the patients, at the time of evaluation, are still located in the Emergency rooms of the institutions.

2. The North Texas Poison Center handles approximately 80,000 calls per year and provides treatment advice for a large spectrum of toxicologic exposures. Rotators are exposed to these clinical contacts during their rotation.

C. Student Responsibilities (and to whom accountable)

The Final Evaluation is signed by the Toxicology fellowship Director, Dr. Kleinschmidt.

General Responsibilities include:

1. Be on time and be an active participant.

2. Present Patients at Attending Rounds in an appropriate way.

3. Learn the Poison Center computer system.

4. Research and answer specially assigned questions.

5. Complete the weekly assignments for the Visual.


7. Participate in the Wednesday conferences.
8. Deliver an appropriate end-of-the-rotation presentation and provide an electronic copy to the fellows.

9. Provide PDF versions of all papers that you have obtained for any reason.

10. Demonstrate, through case discussions, that your knowledge is improving during the rotation.

11. Contribute to ongoing toxicology research when asked.

III. Method of evaluation of students:

The Medical Toxicology Fellows and the Toxicology attending staff will evaluate the students.