



Virginia Commonwealth University  
**VCU Scholars Compass**

---

Medical Education Symposium

School of Medicine

---

2017

# Medical Toxicology for the Emergency Medicine Clerkship

Michelle Troendle  
VCU

Follow this and additional works at: [https://scholarscompass.vcu.edu/med\\_edu](https://scholarscompass.vcu.edu/med_edu)

 Part of the [Medicine and Health Sciences Commons](#)

© The Author(s)

---

Downloaded from

[https://scholarscompass.vcu.edu/med\\_edu/33](https://scholarscompass.vcu.edu/med_edu/33)

This Poster is brought to you for free and open access by the School of Medicine at VCU Scholars Compass. It has been accepted for inclusion in Medical Education Symposium by an authorized administrator of VCU Scholars Compass. For more information, please contact [libcompass@vcu.edu](mailto:libcompass@vcu.edu).



# Medical Toxicology for the Emergency Medicine Clerkship

Michelle Troendle, M.D.

Virginia Poison Center, Division of Clinical Toxicology, Department of Emergency Medicine

## Introduction

- Medical toxicology is a weak area for medical students. This is multi-factorial and may be due to:
- Few fellowship-trained medical toxicologists
  - Subject overshadowed
  - Not presented in engaging manner
  - Misperception that the subject is not as critical

## Objectives

- Recognize and apply basic principles of medical toxicology to poisoned patient
- Enhance recognition/management of:
  - Acetaminophen toxicity
  - Salicylate toxicity
  - Toxidrome
- Improve performance on pre-test and post-test
- Identify gaps in medical knowledge
- Keep audience engaged
- Minimal use of power point

## Methods

- Pre-test taken before course and before assigned reading
- 10 pages assigned reading
- Teaching methods included:
  - Flipped classroom
  - Case-based learning
  - Props
  - Video Clips
  - Simulation Lab
- Post-test after course
- Anonymous survey at end of course



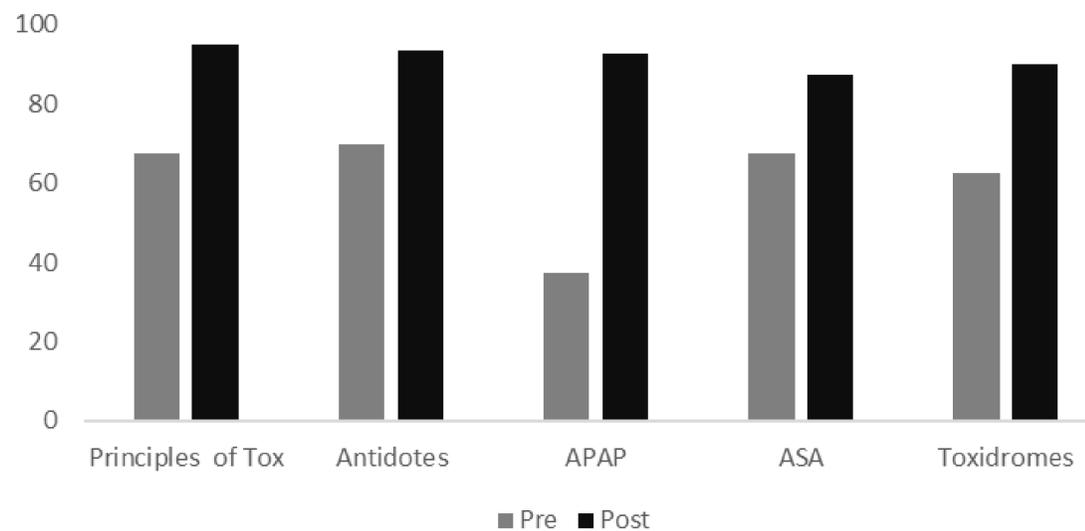
## Results

- Knowledge gaps identified in all areas
- Improvement on all post tests
- Audience engaged
- Overwhelmingly positive feedback
- Nearly all students felt curriculum should be continued
- Students felt better able to care for a patient with a toxidrome, acetaminophen overdose, or salicylate overdose

## Conclusions

- Medical toxicology should be part of emergency medicine clerkship
- Minimal use of power-point lectures is encouraged
- Limitations:
  - Requires small classroom
  - Large amount of preparation
  - Lack of student preparation

Mean Pre and Post-test Scores



## References

Tintinalli, Judith E Contributor, Cline, David Contributor, & American College of Emergency Physicians Content Provider. (2012). *Tintinalli's emergency medicine manual* (7th ed. / [edited by] David M. Cline ... [et al] ; American College of Emergency Physicians.. ed.). New York: McGraw-Hill. Chapter 106: Analgesics

Tintinalli, Judith E Contributor, Cline, David Contributor, & American College of Emergency Physicians Content Provider. (2012). *Tintinalli's emergency medicine manual* (7th ed. / [edited by] David M. Cline ... [et al] ; American College of Emergency Physicians.. ed.). New York: McGraw-Hill. Chapter 100: General Management of the Poisoned Patient

Howland, Mary Ann Contributor, Lewin, Neal A. Contributor, Flomenbaum, Neal Editor, Goldfrank, Lewis R Editor, & Hoffman, Robert S Contributor. (2014). *Goldfrank's toxicologic emergencies* (10th ed.). Chapter 35: Acetaminophen