***Module overview***

Regression is a family of analysis techniques that are commonly used to in many fields – including epidemiology. A complete study of the mathematical machinery that powers regression analysis is beyond the scope of this course. Additionally, because Intermediate Biostatistics is a required prerequite for this course, we will assume that this is not your first exposure to regression analysis.

In this module, we will review some of the fundamental concepts behind regression analysis. We will also learn how some of the most commonly used regression models are implemented in R. Finally, we will review proper interpretation of the regression results generated by R.

***Module topics / Key Concepts***

* Overview of regression.
* Generalized Linear Models (GLMs)
  + Linear regression models
  + Logistic regression models
  + Poisson regression models

***Required Readings***

Please read the following textbook chapters **before** our next in-class lab session:

* Szklo, M., & Nieto, F. J. (2019). *Epidemiology: Beyond the Basics*. Burlington: Jones & Bartlett Learning.
  + Chapter 7, Sections 7.3.4-7.4.3, pages 279 – 299
* Pearl J., & Mackenzie D. (2018). *The Book of Why: The New Science of Cause and Effect*. Basic Books.
  + Chapter 2. From Buccaneers to Guinea Pigs: The Genesis of Causal Inference

***Optional supplemental material***

* None

***Assignments***

1. Check on learning quiz
2. Lab
3. Module quiz