BIOS6643 Longitudinal

L1 Introduction

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Outline I

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2 Summary

Learning Objectives

1. Understand why we need special methods
2. Discuss example datasets that are longitudinal
3. Discuss time series vs. longitudinal; formats for longitudinal data
4. Understand the assumptions for longitudinal models
5. Review analyses of longitudinal data with two time points

Baseline-as-covariance model

$$Y_{i2} = \beta_0 + \beta_1 Y_{i1} + \beta_2 x_i + \epsilon_i$$

We allow the slope of the baseline value to be anything (based on fit).

Example for discussion: cholesterol data

Any other type of simple clustering, with 2 responses per cluster can be analyzed similarly. (E.g., pairing by married couple, pairing by year of measurement.)

Summary

1. Why do we need special methods?
2. Discussed example datasets that are longitudinal
3. Discuss time series vs. longitudinal; formats for longitudinal data
4. Assumptions for longitudinal models
5. Analyses of longitudinal data with two time points