

Inferences from binary longitudinal data

In the previous chapters we focused on modeling the means over time from a continuous response vector. In clinical trials we often encounter cases, where our response is however not continuous, but rather discrete. Discrete data can stem from either count data, such that values are taken in (a subset) of the natural numbers, or ordinal data, where values represent distinct categories, or binary data. In the latter case only values 0 and 1 are taken and represent the presence or absence of a clinical status, such as alive or dead at time X , hospitalized or not hospitalized at time X or response or non-response on a specific scale at time X .

In this case we use *generalized linear models* for the analysis of discrete longitudinal data.