

## CONSIDERATIONS ON THE INCLUSION OF RANDOM EFFECTS IN THE TRANSITION MARKOV MODELS

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- **ABSTRACT:** *This work considers the structure of repeated measures in time with binary outcomes and presents a model for mixed transition. The proposed method is based on the maximum likelihood theory and was implemented in the software R. A simulation study was conducted and the results showed a tendency of these models to hide the existence of random effects when the number of occasions is limited, leading to biased estimates. The procedure can be useful in situations where one want to add random effects on transition models, unifying two classes of models and allowing the interpretation of the matrices of transition probabilities in terms of individuals.*
- **KEYWORDS:** *Longitudinal data; transition models; random effects; maximum likelihood.*

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