

## Some Event History Terminology

**Accelerated lifemodell** : a model in which the log of the observed duration is directly modelled.

**Case-specific random error term** : an alternative name for a random effect.

**Censoring**: in event histories there can be cases for which the event does not take place by the end of the study (or observation period), such cases are termed as censored (or technically right-censored).

**Competing risks** : form of analysis where probabilities of transition to alternative outcome states are compared against each other.

**Cox model** : A regression model for event histories suitable for data with censored cases. Also known as the proportional hazard model.

**Duration**: time in a particular state, or length of episode.

**Episode**: period over which a record occupies a particular state.

**Event**: the end of an episode, change in state, or transition.

**Event history** : a sequence of events across time.

**Failure time** : an alternative name for the time at which an event occurs, this term is used in industrial and engineering applications.

**Frailty**: an alternative term used in medical statistics and epidemiological studies for residual heterogeneity or unobserved heterogeneity.

**GLIM:** Generalized Linear Interactive Modelling-Software GLIM4.

**GLM:** generalized linear model a family of common regression models.

**Hazard:** rate at which events occur or the risk of an event occurring.

**Initial condition :** the condition or state that a case (or subject) is in at the start of the observation period.

**Lagged model :** a model that takes account of the previous outcome (i.e.  $y_{at t-1}$ )

**Markov model :** a model that takes into account previous outcomes and estimates two sets of parameters. State dependence is better represented.

**Logistic mixture model :** alternative terms for random effects logit model.

**Logit model :** Logistic regression or binary regression.

**Pooled logistic regression :** term used when a standard logistic regression model is applied to longitudinal (or panel) data. This model will usually be inappropriate.

**Random effects model :** a regression model that is appropriate for longitudinal (or panel) data.

**Residual heterogeneity :** term used to describe the effect of omitted explanatory variables. These variables might be unmeasured or even unmeasurable.

**Risk set :** the group (or set) of subjects at time  $t$  yet to experience an event.

**SABRE:** Software for the Analysis of Binary Recurrent Events.

**Spell**: episode.

**State**: classification for the current duration or episode (e.g. 'married', 'unemployed').

**Statespace** : The time-by-state combinations that define event history information.

**Survival analysis** : term used in biostatistics and epidemiology for event history analysis.

**Survival curve** : survival function.

**Unobserved heterogeneity** : alternative term for residual heterogeneity.

**Transition**: movement from one state to another.

**Waiting time** : duration.