

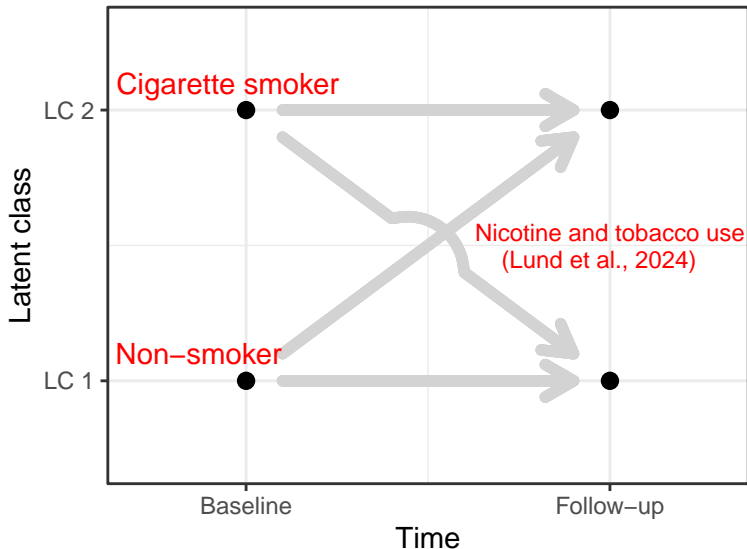
Latent Transition Analysis Using R

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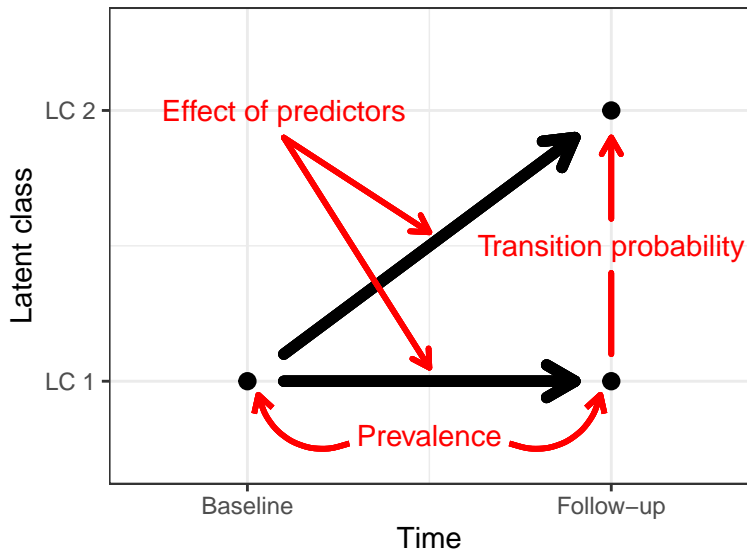
Transitions over time

How individuals can change between 2 latent classes between 2 time points



Modelling transitions

Looking at a pair of transitions: changing class: yes or no?



Analysis using R

Flexible, modular approach with 3 steps modifiable in several ways:

- Prevalences:
 - ▶ Latent class analysis: `poLCA()` from the package “poLCA”
- Transition probabilities:
 - ▶ logistic regression: `glm()` for each latent class at follow-up
- Effects of predictors – odds ratios (OR)
 - ▶ logistic regression: `glm()` for each pair of transitions of interests

Additional modelling aspects:

- Various extensions/modifications possible, such as:
 - ▶ missing values through imputation: “mice”
 - ▶ hierarchical structures: “lme4”, “sandwich”
 - ▶ other approaches to LCA: “BayesLCA”, “tidySEM”
- No simultaneous statistical model assumed, e.g., no assumption about measurement invariance (in contrast to “LMest”, commercial software)

(Lund & Ritz, 2024; Ritz, 2024)

References

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