

Estimating Drinking Trajectories in the United States from Adolescent Period to Old Age: A Three-Step Approach

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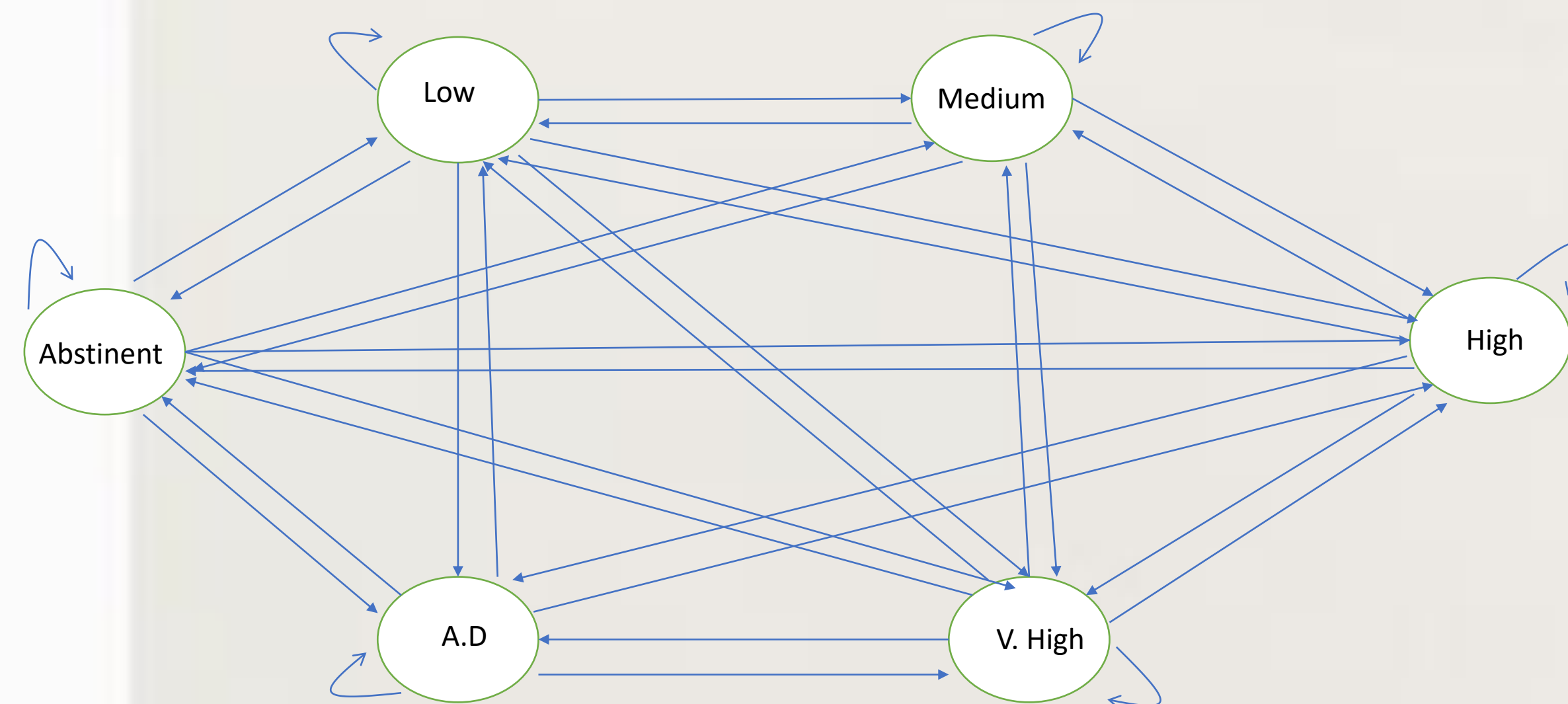
Background

Understanding how people transition over time from adolescence to old age across levels of drinking is crucial when trying to understand the lifetime effects of intervention programs for adolescent drinking. This study estimates the transition probabilities between different levels of alcohol consumption to understand the long-term drinking trajectories of adolescents in the United States.

Research Question

How do we follow people's drinking behavior from adolescence to old age in the USA?

Different Drinking States



Methods

Transition Probability Calculation Method

NLSY97*

NSDUH*

Estimation (Bayesian Simulation)

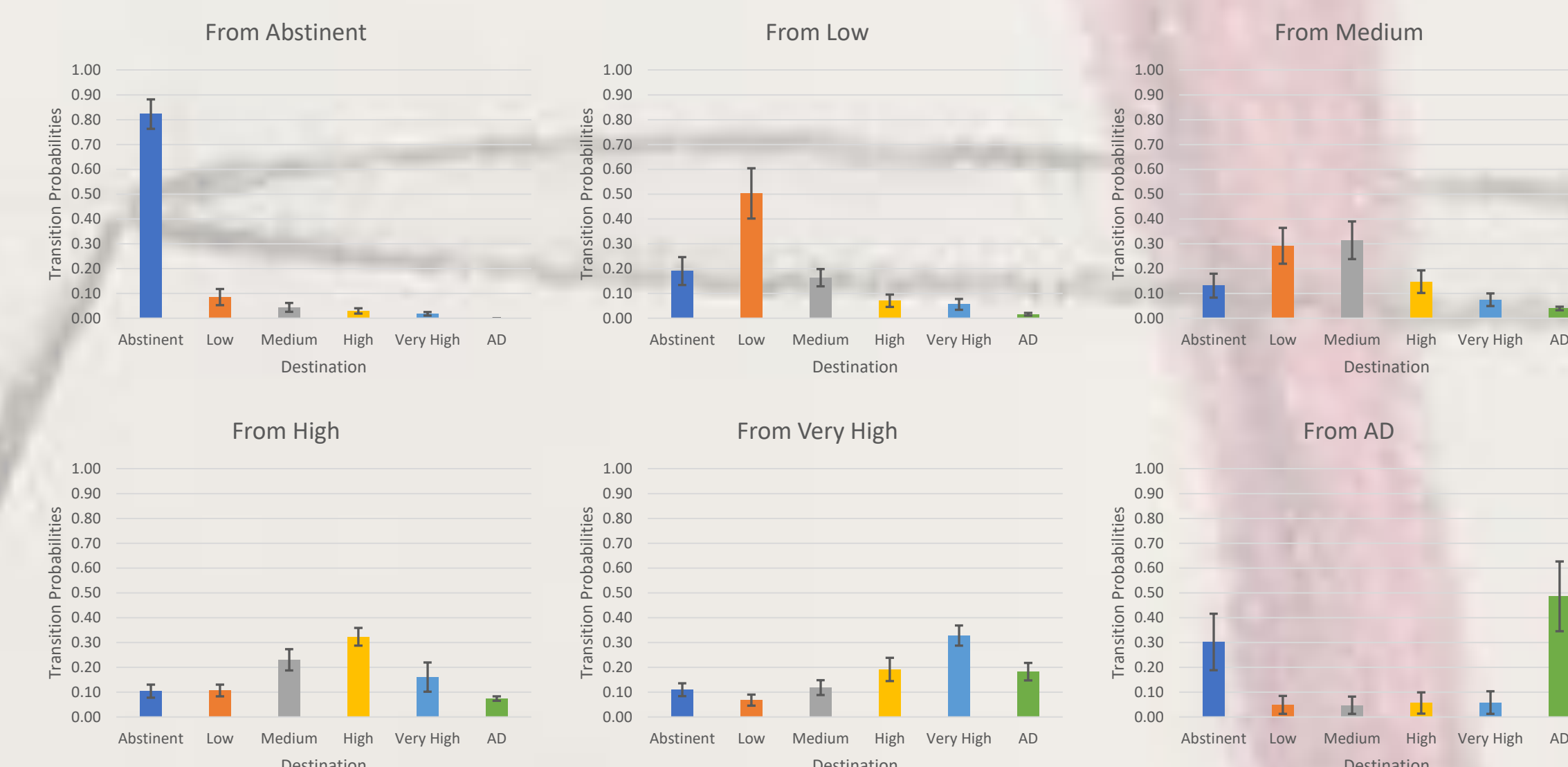
Calibration (Simulated Annealing)

Validation (Chi-squared test)

*NLSY97= National Longitudinal Survey of Youth 1997 cohort
*NSDUH= National Survey on Drug Use and Health

Results

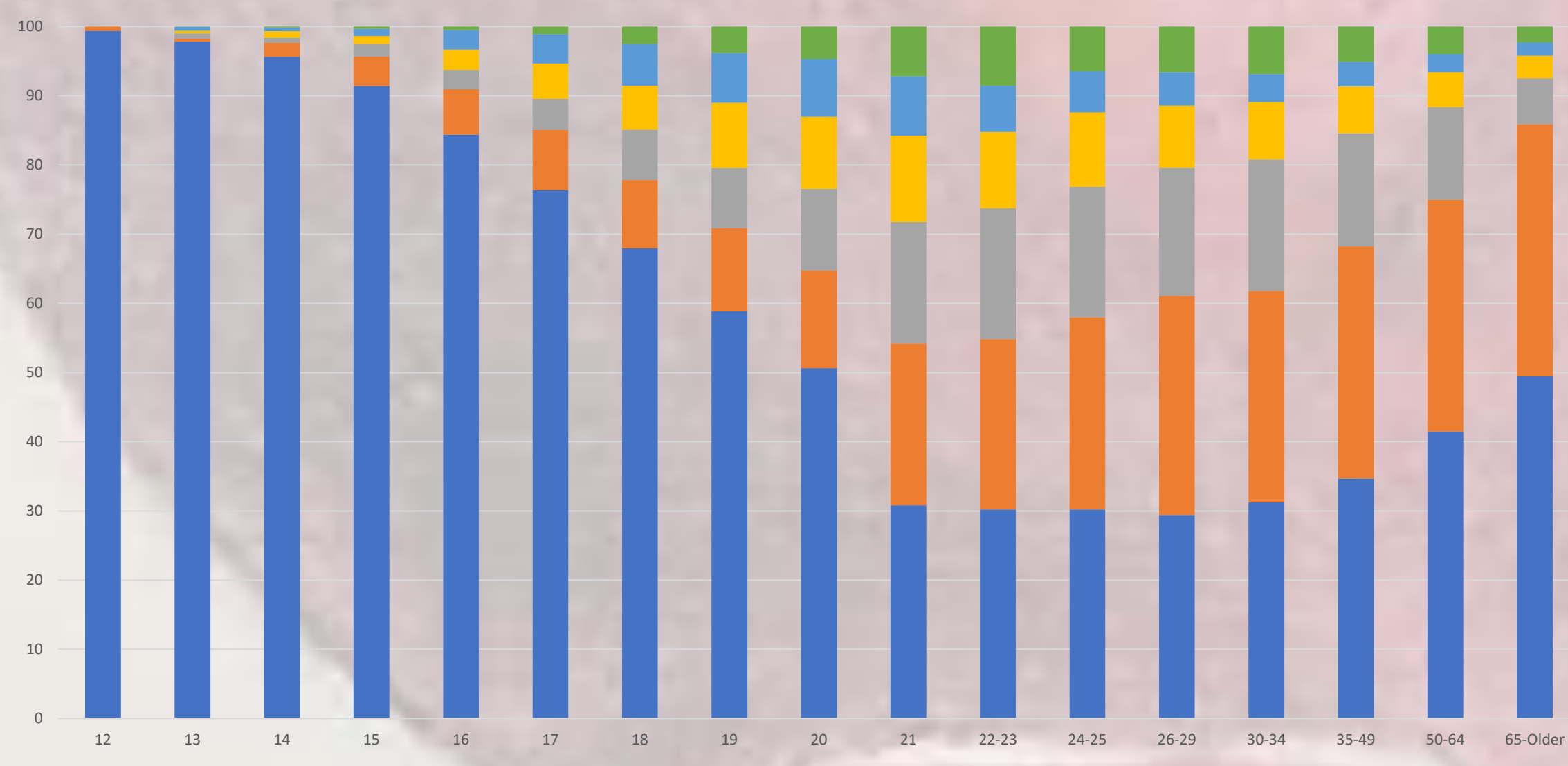
Average Transition Probabilities (Male)



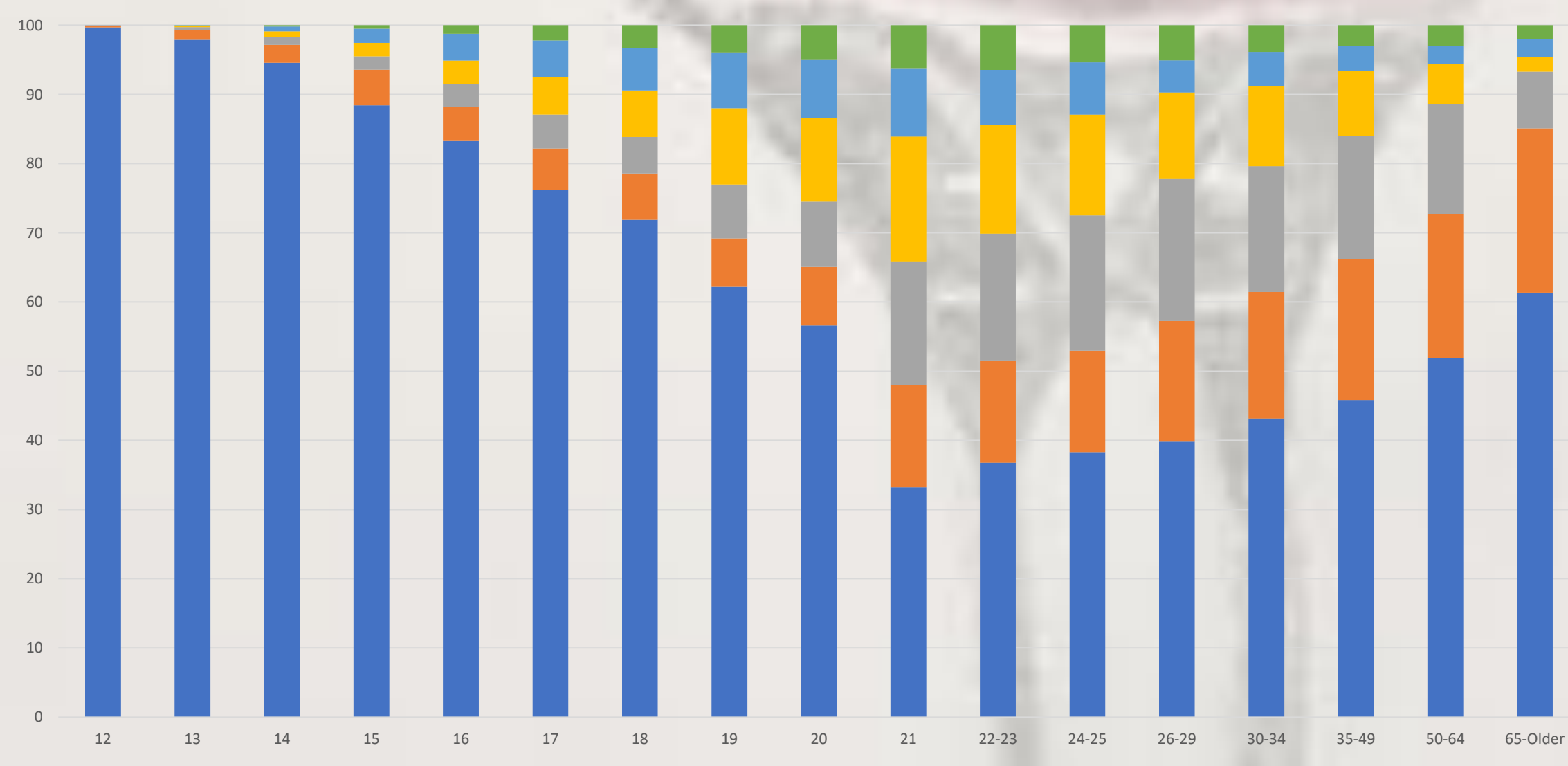
Average Transition Probabilities (Female)



Simulated Distribution by Age for Male Population



Simulated Distribution by Age for Female Population



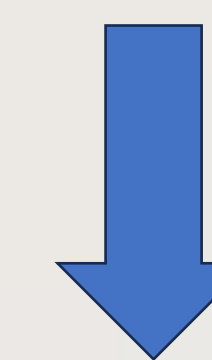
Transitions from one state to another state for a cohort of 1000 Males



Transitions from one state to another state for a cohort of 1000 Females



What Next?



These transition probabilities are essential to understanding the progression of alcohol use over a lifetime and can be used as input to model assessing the long-term impacts of intervention programs for adolescent drinking.

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