

Day 4, Practical 1

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This practical consists of understanding the study and the results of ?. You should read the items listed below in Section 1 and write up your responses.

1 Questions for ?

1. What is the overall research question considered in the paper?
2. What are the observed variables? How many longitudinal time-points are there and how are they defined?
 - e.g., what do A_t , Z_t and Y_t measure?
 - what does M_t measure?
3. Which variables affect each other? Are there any time-dependent confounders?
4. What are the hypothetical regimes that are considered? Static regimes? Dynamic? What are the corresponding causal parameters?
 - what is the targeted causal contrast?
 - how is death handled?
5. Go over the stated causal assumptions required to identify the causal parameters. Is positivity equally likely to hold for all regimes/strategies considered?
6. Results: The authors consider a 'naive' approach, an IPW estimator, a g-formula estimator and a TMLE estimator. What results do they find with each method (see Figure 1 of the paper)? How do they differ in terms of bias and variance?