

# DSS Statistics Seminar

December 14, 2021, 13:00

[https://uniroma1.zoom.us/j/86881977368?pwd=S  
WRFcVFjMDZTa0lXZk05TE1zNm5adz09](https://uniroma1.zoom.us/j/86881977368?pwd=S<br/>WRFcVFjMDZTa0lXZk05TE1zNm5adz09)

Passcode: 432940

## Challenges in emulating target trials

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The framework of target trial emulation (TTE) is increasingly adopted when researchers wish to address causal questions using observational data. TTE has multiple advantages, starting from the clarity of explicitly specifying the hypothetical target experimental trial for the questions of interest.

However, because the data often arise from linked administrative databases that are not created for research purposes, their handling demands extreme care if biased conclusions are to be avoided. Two main sources of bias have been broadly recognised in the epidemiological literature: immortal time bias and inappropriate selection of comparative groups. This talk will focus on other challenges to emulating target trials which are not commonly aired, using two examples.

Hernán et al. Specifying a target trial prevents immortal time bias and other self-inflicted injuries in observational analyses. *Journal of Clinical Epidemiology*, 2016: 79 (2016) 70e75

Hernán and Robins. Using Big Data to Emulate a Target Trial When a Randomized Trial Is Not Available. *American Journal of Epidemiology*, 2016: 183, 758–764

Suissa. Immortal time bias in observational studies of drug effects. *Pharmacoepidemiol Drug Safety*, 2007: 241–9



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SCUOLA DI SPECIALIZZAZIONE IN  
STATISTICA SANITARIA E BIOMETRIA**