

UCL Network of Applied Statisticians in Health

Target Trial Emulation Short Course* Practical 1

28 November 2022

Introduction

This practical will be performed in small (randomly allocated) groups who will work in separate Zoom break-out rooms.

Together, you will design a target trial and then attempt to emulate it.

Once you have joined the other members of the group, please:

- make a note of your room number because it identifies the group,
- select one member of the group to be the rapporteur for the group when we all reconvene together at the end of this exercise,
- work together to complete the two tasks described below.

Some of the groups will be asked to present their design at the end. So, to aid your discussion and presentation we are providing template slides called "TTE_practical1_empty_slides.pptx".

The Tasks

The tasks:

1. Design the protocol of a target trial that would address the question:

*Does initiation of Statin use affect the risk of cardiovascular disease
in otherwise healthy individuals?*

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2. Design the protocol of the corresponding emulated trial using **electronic health records** on UK patients with linked information over the period **January 2000** to **December 2006**. Each linked electronic health record holds data on:

- demographic characteristics
- socioeconomic characteristics
- symptoms
- diagnoses
- laboratory test results
- prescription of statin
- vital status (including cause of death)

Think carefully about how to choose “time 0” and which treatment groups you wish to create from the administrative data you have available in order to answer the question.