# A target trial emulation with an extension to subgroups: an example for relapsing-remitting multiple sclerosis

**First published:** 18/06/2024

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Study Ongoing

## Administrative details

**EU PAS number**

EUPAS1000000135

**Study ID**

1000000135

**DARWIN EU® study**

No

**Study countries**

- ☐ Netherlands
- ☐ Sweden

**Study description**

The objective is to emulate the comparative effectiveness of oral dimethyl fumarate versus glatiramer acetate in the Swedish multiple sclerosis registry (SMSreg) given the results of a previously published randomized controlled trial. The target trial emulation (TTE) framework will be used in a strict and pragmatic setting. The research objective for both settings is the same: to study the effect of first treatment initiation with oral dimethyl fumarate on the two year annualized relapse rate, using subcutaneous glatiramer acetate as an active comparator, in Swedish relapsing-remitting multiple sclerosis patients.

This strict scenario is used to validate the target trial emulation framework by trying the reproduce the findings of the CONFIRM trial. In the pragmatic scenario, we aim to include additional patient groups by applying milder in- and exclusion criteria as opposed to the strict scenario. The milder in- and exclusion criteria in the pragmatic scenario will lead to more diverse patient characteristics and thereby to the inclusion of the previously mentioned subpopulations. Possible subpopulations that will be included in the pragmatic scenario as opposed to the strict scenario are: elderly and pediatric patients. These subpopulations have been identified through the protocol and results of the CONFIRM trial and the European public assessment reports and summaries of product characteristics of both dimethyl fumarate (Tecfidera) and glatiramer acetate (Copaxone or Copolymer-1).

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**Study status**

Ongoing

# Research institutions and networks

## Institutions

## University of Groningen

Netherlands

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Institution | Educational Institution

# Contact details


**Study institution contact**

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Primary lead investigator

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# Study timelines

**Date when funding contract was signed**

Planned: 01/02/2024

Actual: 01/02/2024

**Study start date**
Planned: 01/04/2024

Actual: 01/07/2024

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**Data analysis start date**
Planned: 01/07/2024

Actual: 01/07/2024

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**Date of final study report**
Planned: 01/10/2024

## Sources of funding

- Other public funding (e.g. hospital or university)

## More details on funding

No funding was received for this study.

## Study protocol

HARPER_protocol_TTE_CONFIRM_V3.pdf (521.78 KB)

## Regulatory

**Was the study required by a regulatory body?**

No

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**Is the study required by a Risk Management Plan (RMP)?**

Not applicable

# Methodological aspects

## Study type

**Study topic:**

Human medicinal product

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**Study type:**

Non-interventional study

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**Scope of the study:**

Effectiveness study (incl. comparative)

Method development or testing

**Data collection methods:**

Secondary use of data

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**Study design:**

Target trial emulation following a strict and pragmatic scenario (Retrospective new user active comparator cohort study).

**Main study objective:**

To compare the effect estimates from the strict scenario with those obtained from the pragmatic scenario to identify the effect estimates of subpopulations neglected in the strict scenario and in the CONFIRM trial.

## Study Design

**Non-interventional study design**

Cohort

## Study drug and medical condition

**Name of medicine**

TECFIDERA

**Study drug International non-proprietary name (INN) or common name**

DIMETHYL FUMARATE

GLATIRAMER ACETATE

**Anatomical Therapeutic Chemical (ATC) code**

(L03AX13) glatiramer acetate

glatiramer acetate

(L04AX07) dimethyl fumarate

dimethyl fumarate

**Medical condition to be studied**

Relapsing-remitting multiple sclerosis

Secondary progressive multiple sclerosis

## Population studied

**Short description of the study population**

Swedish multiple sclerosis patients registered in SMSreg.

**Age groups**

Adult and elderly population (≥18 years)

Adults (18 to < 65 years)

Adults (18 to < 46 years)

Adults (46 to < 65 years)

Elderly (≥ 65 years)

Adults (65 to < 75 years)

Adults (75 to < 85 years)

Adults (85 years and over)

**Estimated number of subjects**

500

## Study design details

**Setting**

Swedish multiple sclerosis patients registered in SMSreg initiating either dimethyl fumarate or glatiramer acetate.

**Comparators**

Glatiramer acetate (active comparator).

**Outcomes**

Time to first confirmed relapse.

Annualized relapse rate after two years.

# Data management

## ENCePP Seal

The use of the ENCePP Seal has been discontinued since February 2025. The ENCePP Seal fields are retained in the display mode for transparency but are no longer maintained.

## Data sources

**Data source(s), other**

Swedish multiple sclerosis registry (SMSreg)

## Use of a Common Data Model (CDM)

**CDM mapping**

No

## Data quality specifications

**Check conformance**

Unknown

**Check completeness**

Unknown

**Check stability**

Unknown

**Check logical consistency**

Unknown

## Data characterisation

**Data characterisation conducted**

No