# Time to treatment intensification in patients receiving metformin+incretin-based medicines versus metformin+other hypoglicemics (Time to treatment intensification with incretins)

**First published:** 01/08/2017

**Last updated:** 22/02/2024

Study Planned

## Administrative details

**EU PAS number**

EUPAS20169

**Study ID**

28096

**DARWIN EU® study**

No

**Study countries**

Italy

**Study description**

Due to the progressive nature of tipe 2 diabetes, antidiabetic drugs tend to lose their efficacy over time so that treatment intensification is required. Current guidelines recommend metformin as the first choice in newly treated patients with type 2 diabetes. Among possible second-line add-on treatments, incretin-based medicines have been associated to a more durable glycemic control, although available evidence from observational studies is conflicting. The aim of this study is to the analyse routinely collected Italian admistrative data collected from different local and regional health authorities in order to compare the time to treatment intensification in patients with type 2 diabetes receiving incretin-based medicines versus other non-insulin antidiabetics as add-on therapy to metformin.

**Study status**

Planned

# Research institutions and networks

## Institutions

### Agenzia regionale di sanità della Toscana (ARS Toscana)

Italy

**First published:** 01/02/2024

**Last updated:** 23/03/2026

Institution | EU Institution/Body/Agency | ENCePP partner

## Pharmacoepidemiology Research Group, University of Eastern Piedmont (UPO)

Italy

**First published:** 07/11/2016

**Last updated:** 29/07/2024

Institution | Educational Institution | ENCePP partner

## Pharmacoepidemiology and Pharmacosurveillance Unit - National Center for Drug Research and Evaluation, Italian National Institute of Health (ISS)

Italy

**First published:** 23/03/2010

**Last updated:** 23/07/2026

Institution | Educational Institution | Laboratory/Research/Testing facility | ENCePP partner

## Department of Pharmacology, University of Bologna (UNIBO)

Italy

**First published:** 25/06/2010

**Last updated:** 13/02/2012

Institution | Outdated | Educational Institution | ENCePP partner

# Department of Biomedical and Dental Sciences and Morphofunctional Imaging, University of Messina

Italy

**First published:** 29/11/2021

**Last updated:** 20/08/2024

Institution | Educational Institution | Hospital/Clinic/Other health care facility

## Contact details

### Study institution contact

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Study contact

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### Primary lead investigator

Roberto Giuseppe

Primary lead investigator

## Study timelines

### Date when funding contract was signed

Actual: 16/01/2017

**Study start date**
Planned: 15/09/2017

**Date of final study report**
Planned: 31/08/2019

## Sources of funding

- Other

## More details on funding

This was a spontaneous initiative of the researchers participating to the project.

No fubndings were received from any external source.

## Study protocol

Time to treatment intensification_incretins vs other hypoglicemics_Protocol_v1.1.pdf (298.9 KB)

Time to treatment intensification_incretins vs other hypoglicemics_Protocol_v1.2.pdf (311.15 KB)

## Regulatory

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

No

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

Not applicable

# Methodological aspects

## Study type

**Study type:**

Non-interventional study

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**Scope of the study:**

Effectiveness study (incl. comparative)

**Main study objective:**

To compare the time to treatment intensification in patients with type 2 diabetes receiving incretin-based medicines versus other non-insulin antidiabetics as add-on therapy to metformin.

## Study Design

**Non-interventional study design**

Cohort

## Study drug and medical condition

**Anatomical Therapeutic Chemical (ATC) code**

(A10BH) Dipeptidyl peptidase 4 (DPP-4) inhibitors

Dipeptidyl peptidase 4 (DPP-4) inhibitors

(A10BB) Sulfonylureas

Sulfonylureas

(A10BG) Thiazolidinediones

Thiazolidinediones

(A10) DRUGS USED IN DIABETES

DRUGS USED IN DIABETES

(A10BX02) repaglinide

repaglinide

**Medical condition to be studied**

Type 2 diabetes mellitus

# Population studied

**Age groups**

- Adults (18 to < 46 years)
- Adults (46 to < 65 years)
- Adults (65 to < 75 years)
- Adults (75 to < 85 years)
- Adults (85 years and over)

**Estimated number of subjects**

20.000

# Study design details

**Outcomes**

Treatment intensification, i.e. insulin initiation or add-on of a third non-insulin antidiabetic, 1) insulin initiation 2) add-on of a third non-insulin antidiabetic drug3) switch to a third non-insulin antidiabetic drug

**Data analysis plan**

Survival curves describing the time to treatment intensification will be plotted with the Kaplan-Meier method. The log rank test will be used to test the statistical significance of the difference between different groups.Cox regression models will be applied to estimate hazard ratios, with 95%

confidence intervals, and compare the time to treatment intensification from index prescription in patients treated with MET+DPP4i versus those in the other exposure categories. Variables measured at baseline will be included in the model to account for their potential confounding effect.

## Documents

**Study publications**

Time to Treatment Intensification in Patients Receiving DPP4 Inhibitors Versus ...

# 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)**

ARS Toscana

**Data source(s), other**

Regional Administrative databases of Umbria Italy, Regional Administrative databases of Piedimont Italy, Administrative database of the Local Helath Authority of Caserta Italy

**Data sources (types)**

Administrative healthcare records (e.g., claims)

Drug dispensing/prescription data

# 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