

## **The treatment results of hypercholesterolemia and costs of care for prediabetics compared with type 2 diabetics in Southwest Finland**

**Background:** Prediabetics have a markedly increased risk of developing type 2 diabetes and cardiovascular diseases. Moreover, the costs of treatment caused by type 2 diabetes and its comorbidities are high.

**Research questions:** Does the intensity of lipid treatment differ in prediabetics and type 2 diabetics if cardiovascular diseases were established/not diagnosed? How do macrovascular complications affect the costs of treatment?

**Methods:** This was a qualitative retrospective register study. The study included data from 37 501 type 2 diabetics and 42 554 prediabetics from Southwest Finland in 2019.

Prediabetics were identified based on abnormal glucose metabolism from the patient registers of the health centres. Diabetics were identified and grouped based on laboratory tests, diagnosis, special reimbursement rights for antidiabetic drugs. Cardiovascular diseases were identified based on the ICD10 diagnosis from the historical data. Treatment levels for LDL cholesterol and costs were compared in type 2 diabetics and prediabetics with and without cardiovascular comorbidities.

**Results:** 32% (11 998) of type 2 diabetics and 26% (10 892) of prediabetics had cardiovascular comorbidities. LDL was studied in 77% of type 2 diabetics and 66% of prediabetics. Only 40% of diabetics and 30% of prediabetics, who had cardiovascular disease, achieved a target of LDL < 1.8 mmol/l and more than half of those without complications had LDL > 2.5 mmol/l. The total costs of specialised medical care and pharmacotherapy per patient per year for type 2 diabetics with complicated disease were EUR 4 688 and without complications EUR 1 981 and for prediabetics EUR 3 376 and EUR 1 961, respectively.

**Conclusions:** Treatment of prediabetics is not as intensive as the treatment of diabetics. Comorbidities increase the costs of both pharmacotherapy and specialised medical care compared to patients without complications. Earlier identification and treatment could improve the prediction of prediabetics and achieve cost savings.