

Better use of data in the treatment of people with type 2 diabetes in general practice – the DataSam project

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INTRODUCTION

Multifactorial management of diabetes mellitus is essential to reduce the risk of diabetes-related complications in people with type 2 diabetes (T2D). Therefore, guidelines on T2D treatment and complications screening programs recommend a multifactorial approach. Danish studies of general practice have shown that electronic surveillance of diabetes and complications data increases focus on treatment guidelines and is an effective tool to improve the quality of diabetes care in general practice.

PURPOSE

The present study aims to examine to what extent a national electronically based diabetes treatment and screening quality programme (FLP) could be implemented in general practice. Furthermore, the present study examines whether an increased data focus in general practice can improve clinical parameters.

METHODS

In collaboration with an organisational advisor specialized in general practices (MRJ) and the Department of Endocrinology and Nephrology at Nordsjællands Hospital, general practices in northern Zealand, Denmark (population: 464.000) were invited to participate in the study. Participating general practices were offered optimisation of using electronic data from their T2D population in the treatment. Every clinic planned a quality development process based on data from their T2D patient population. The participating clinics targeted specific organisational factors such as technical data administration, local guidelines, and workflow routines regarding the use of data from their T2D population and T2D treatment-specific factors such as severely raised variables or comorbidity (e.g., ischemic heart disease). They worked to establish workflow routines and methods to incorporate the data about their T2D population in the quality development in the clinic. Progress in clinical variables (The national quality programme data includes specific process/results indicators from the Danish Diabetes Database (DDiD)) will be measured at baseline and after 6 and 12 months. At baseline, and after 6 and 12 months, the participating clinics answered a survey about practice organisation, current local guidelines regarding their T2D treatment, and their use of FLP on a regular basis. The questions were answered on a 1-5 Likert scale.

Process Indicators	DataSam, mean (SD)	DDiD standards
Patients with annual control within 12 months (%)	64 (21)	-
Patients with "Forløbsplan" within 12 months (%)	45 (22)	-
*Measurement of blood pressure within 12 months (%)	75 (15)	≥ 95
*Measurement of LDL cholesterol within 12 months (%)	78 (8)	≥ 95
*Measurement of HbA1c within 12 months (%)	92 (4)	≥ 95
*Measurement of eGFR within 12 months (%)	84 (8)	≥ 95
*Patients with micro/macro-albuminuria and no treatment with ACE/AT2 (%)	8 (3)	-
*Patients with ischemic heart disease and no treatment with GLP-1/SGLT2 (%)	38 (39)	-
Results indicators		
*Patients with HbA1c ≤ 53 mmol/mol (%)	64 (8)	≥ 70
*Patients with HbA1c ≥ 70 mmol/mol (%)	11 (4)	≤ 5
*Patients with systolic blood pressure ≤ 140 mmHg (%)	60 (11)	≥ 80
*Patients with LDL cholesterol ≤ 2.5 mmol/L (%)	73 (9)	≥ 85
*Measurements of U-Alb/crea ratio within 12 months (%)	55 (11) ‡	≥ 85

‡Data errors with the value "Low", estimated "true" value: 73%

Table 1: Quality indicators of Type 2 diabetes treatment at baseline
Indicators marked with a * are from the Danish Diabetes Database (DDiD).

RESULTS

At baseline, the 19 participating clinics had, on average, approx. 200 patients with T2D (range: 40-478 T2D patients), equivalent to a T2D practice-prevalence of 3.9% (1.5) (mean (SD)). The participating clinics represented 20% of general practices in northern Zealand and had 1-5 physicians (84% of the participating clinics have ≥ two physicians). At baseline, the clinics registered a mean score of 4.2 (0.9) (on a 1-5 Likert scale) when indicating to which degree they have incorporated local guidelines for their T2D treatment, 2.5 (1.3) for regular local conferences on their T2D treatment, and 2.2 (0.8) for using the FLP regularly. Baseline data (Table 1) shows that the participating clinics do not meet the standards for the T2D treatment set by the Danish Diabetes Database (Regionernes Kliniske Kvalitetsprogram). At baseline, 11% of the participating clinics had a local guideline regarding use of the FLP in treating their T2D population.

CONCLUSION

The implementation of the Danish quality programs is inadequate in studied practices. Optimising the use, organisation, and visualisation of data from patient populations can be a relevant tool. The DataSam project may represent a sustainable solution for creating workflow routines through an improved data overview in general practice.

PRELIMINARY RESULTS, BASELINE – 6 MONTHS (N=8)

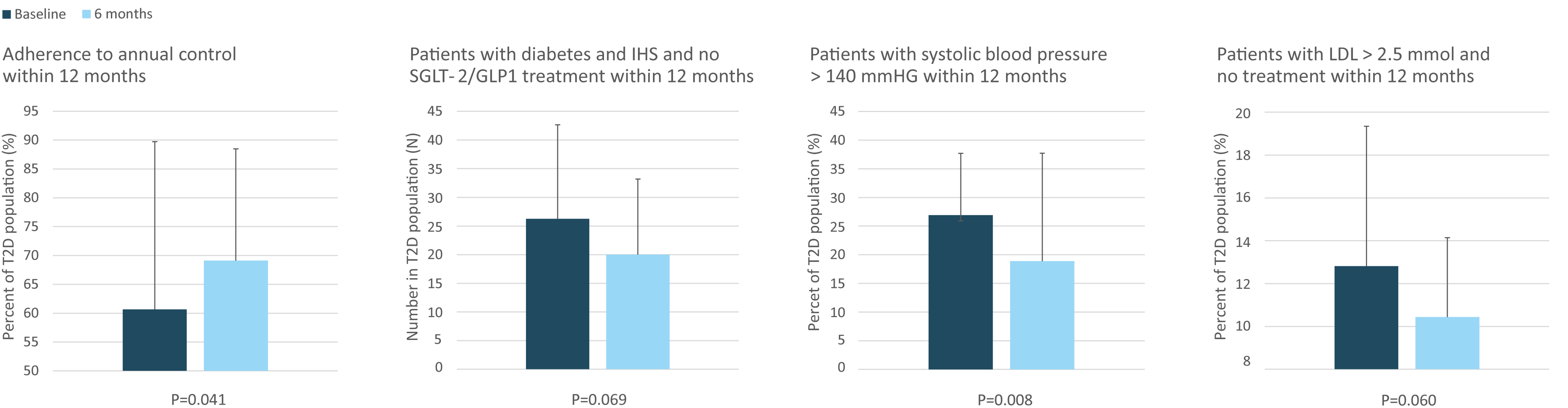


Figure 1