Project title

QualiCCare Study on the Optimization of Treatment of Chronic Patients with Diabetes mellitus Type 2 in Primary Care (Project III)

Research legislation: Non-Clinical trial acc. to the ordinance on non-clinical research (HRO) [1].

Type of Research Project: Research project in which health-related personal data is collected

Risk Categorization: A

Project Lead: Prof. Dr. Emanuel Christ, University Hospital Basel, Petersgraben 4, 4031 Basel, Email: emanuel.christ@usb.ch

PROTOCOL SIGNATURE FORM

The project leader has approved the protocol version 4, dated 30.08.2017, and confirms hereby to conduct the project according to the protocol, the Swiss legal requirements [1, 2], current version of the World Medical Association Declaration of Helsinki [3] and the principles of Good Clinical Practice.

Project leader:

Name: Prof. Dr. med. Emanuel Christ

Date: August 30, 2017 Signature: electronically signed

Sponsors:

QualiCCare Association

Name: Member of the State Council Hans Stöckli, President

Name: Dr. Astrid Czock, Managing Director

Date: August 30, 2017 Signature: electronically signed

1. BACKGROUND AND PROJECT RATIONALE

In 2013 the QualiCCare association was founded, the purpose of which, according to the statutes, is to develop concrete and pragmatic measures for the treatment of the chronically ill in the extended primary care through the interprofessional cooperation of all stakeholders. This involves coordination with the national strategies in the field of chronic diseases (NCD, CVSD, etc.), as well as a continuous review of the measures developed in the "real-life" setting, i.e. in primary care.

Based on international guidelines, the QualiCCare 2011-2013 project identified essential treatment elements for which there is potential for improvement in Switzerland compared with best practice examples. Four priorities were identified for diabetes mellitus type 2: (1) screening and diagnosis, (2) self-management training, (3) drug therapy of diabetes and co-risk factors, and (4) control and treatment of macrovascular and microvascular complications. Specific and pragmatic measures have been developed to improve treatment outcomes. Based on the NCQA recommendations (National Council Quality Assurance) and a best-practice comparison with other countries, developed as part of the QualiCCare project 2011-2013, the Swiss Society for Diabetology and Endocrinology (SGED) developed adapted "criteria for "good" disease management diabetes in primary care" (hereinafter "criteria") for Switzerland. The quality of care for patients with type 2 diabetes can be evaluated by calculating a score determined during the application of the criteria. In two pilot projects, the criteria were followed in a multi-year comparison:

I. Pilot project I: all type 2 diabetes patients of a single primary care practice with several doctors over 3 years;

II. pilot project II: all type 2 diabetes patients in the Chronic Care Management Program in 5 group practices over 2 years.

The aim of the Diabetes Project III is to establish the above-mentioned score in different practice infrastructures. The aim is to record the effect of the score on the quality of treatment and to evaluate its suitability for practical use. The score criteria will additionally include influenza vaccination as an important prevention measure and the drug therapy (oral antidiabetics and/or insulin, antihypertensives, and statins) in order to determine possible comorbidities based on the medication.

At the same time, the present project is also an extension to the previous projects I and II in terms of measuring suitability for practice, as on the one hand a larger number of practices apply the criteria and on the other hand different practice structures are included in the project.

In accordance with Art. 5 and Art. 10 of the Human Research Act (HFG), this project serves to improve public health and meets scientific requirements. The responsible scientific advisory board is independent in its decisions and bases them on the latest scientific findings in this field. In accordance with Art. 7 of the "Ordinance on Human Research Excluding Clinical Trials" (HFV), this is accompanying research of risk category A.

2. PROJECT OBJECTIVES, DESIGN AND STATISTICS

2.1 Hypothesis and primary objective

By implementing evidence-based measures (by means of score), the treatment quality (corresponds to an improvement of the score) of patients with diabetes mellitus type 2 in the "Real World Setting" can be improved within 12 months.

The score can be used in different practice infrastructures and does not result in differences in treatment quality.

2.2 Primary and secondary endpoint(s)

Primary endpoint:

Change in score after use of this method to document care of patients with diabetes mellitus type 2 (baseline vs. 12 months)

Secondary endpoints:

Evaluation of the practicability of the score in different GP practice structures

Comparison of diabetes care (i.e. scores) between different organisational forms of practices (individual practices, group practices, practice chains)

Evaluation of the software for the evaluation of the score.

2.3 Project design

Prospective, non-randomised study without control group.

2.4 Statistics and methodology

Statistical evaluation concept:

Primary endpoint:

Comparison of score baseline vs. 12 months using paired t-test.

Secondary endpoints:

Comparison of score changes between individual practices and practice networks using unpaired t-test.

Evaluation of the evaluation forms with regard to practical suitability and software by means of descriptive statistics.

In the previous two pilot studies, a measurable improvement in treatment quality could be measured in one and five primary care practices, respectively, with an increase in the score to 58 + 20 points. In order to achieve the goal of a relevant improvement of the overall score by a total of 10 points (from 56 to 66 points), 27 centres must be recruited with a significance level of 0.05 and a power of 80% (1). At a dropout rate of 10%, we will recruit 30 centers.

Methodology

Information of the primary care practices regarding the background and goal of the project by means of a letter and informative documentation.

Recruitment of primary care practices, divided into three different practice organisations (individual practices and group practices run on a private basis and with financial autonomy, as well as forms of joint practices with employed physicians without financial autonomy).

A signed contract between QualiCCare and participating primary care practices regulates the collaboration.

Procedure:

A baseline documentation takes place retrospectively from the training/workshop for the past 12 months, and a second, prospective documentation of the treatment is done during the following 12 months.

Training of the participating GPs and practice coordinator on the project including evaluation software, data entry and background to the criteria.

Documentation of the treatment quality of all patients with diabetes mellitus type 2 in a practice structure that meets the inclusion criteria according to the score criteria (baseline).

After 12 months, the treatment quality of the included patients with diabetes type 2 is recorded again using the same score.

2.5 Handling of missing data and dropouts

Dropouts are also recorded because it is assumed that the treatment quality (score) of the collective is not changed.

3. SUBJECTS AND STUDY PROCEDURES

3.1 Project population, inclusion and exclusion criteria

Reason for the number of patients:

In order to achieve the goal of a relevant improvement of the overall score by a total of 10 points (from 56 to 66 points), 27 centres must be recruited with a significance level of 0.05 and a power of 80%. The standard deviation of the total score in the individual practices is + 15, so that a patient population of > 50 patients per practice is necessary.

At a dropout rate of 10%, we will recruit 30 centers.

Inclusion and exclusion criteria:

Inclusion criteria:

All patients who have been diagnosed with type 2 diabetes mellitus according to their primary care provider, i.e. who have ever had HbA1c > 6.4% and/or are taking insulin and/or oral AD according to their patient dossier.

AND are at least 9 months in treatment with the same physician (in group practice in the same practice)

Exclusion:

Supervision <9 months in practice (change of practice, move, death, complete external supervision regarding DM, etc.)

Patients who do not agree to participate in the project

Patients for whom the doctor decides that they cannot participate in the project due to their illness (frailty, end of life).

All excluded patients will be anonymized and the reason for the exclusion will be stated. The excluded patients will not be considered for the evaluation.

3.2 Recruitment, screening and informed consent procedure

The general practitioners will be invited to participate by post with a letter and information about QualiCCare and the project. There will be 10 practices per organisational structure. Each practice documents its diabetes patients based on their patient dossiers according to inclusion criteria. In order to participate in the study, patients will be informed about the study at the next follow-up and asked to sign a letter of consent to participate. A document will be available to the practices for patient information. Patients will be given sufficient time to decide whether to participate in the study.

The practice will receive CHF 50.00 per participating patient with documented score and free use of the diabetes management tool during the duration of the project. The medical services will be reimbursed according to usual tariff, Tarmed. In addition, the practice receives an evaluation of its practice performance compared to the overall collective.

The patient does not receive any financial compensation.

3.3 Study procedures

The duration of the project is 3 years, including recruitment and publication, i.e. from December 2017 until the end of 2020. After the recruitment of the primary care practices, training will take place in the form of an interprofessional workshop for the GPs and the responsible practice assistants on application and background of the score, as well as on its documatation in the tool. After the workshop, the practices will retrospectively create the baseline from their patient files. For the prospective data collection, the score criteria are recorded each time the patient visits the practice. In order to support the interprofessional cooperation with actors outside the GP's practice, the diabetes passport, revised by QualiCCare and distributed by Diabetesschweiz, can be used. Over a period of 12 months, all score criteria per patient must be recorded in the practice (primary endpoint). The project manager evaluates the difference between retrospective baseline and prospective score criteria documentation. The practices receive the evaluation of their practice and must answer a questionnaire to assess the recording tool with regard to practicability and suitability for practice. The results of the study will be published.

A selection bias may occur by not considering patients with difficult psychosocial problems, but since the patient collective is relevant and not the individual patient, this bias is not significant.

3.4 Withdrawal and discontinuation

Exclusion from the project is based on the defined exclusion criteria. This can be done at any time during the project. These are:

Change of practice, departure, or death of the patient; complete external care of the patient by a diabetologist, home, hospital, etc.; patients for whom the doctor decides that they can no longer participate in the project due to their illness (frailty, end of life).

4. REGULATORY ASPECTS AND SAFETY

4.1 Local regulations / Declaration of Helsinki

This research project will be conducted in accordance with the protocol, the Declaration of Helsinki [3], the principles of Good Clinical Practice, the Human Research Act (HRA) [2] and the Human Research Ordinance (HRO) [1] as well as other locally relevant regulations. Project Lead and Sponsor acknowledge their responsibilities.

4.2 Notification of safety and protective measures (HRO Art. 20)

If immediate safety and protective measures have to be taken during the conduct of the research project, the project lead shall immediately be notified (within 24 hours). The project lead must notify the Ethics Committee via BASEC within 7 days and explain the circumstances.

4.3 Serious events (HRO Art. 21)

If a serious event occurs, the research project must be interrupted until the Ethics Committee reaches a decision on the continuation. A serious event is defined as any adverse event where it cannot be excluded, that the event is attributable to the sampling of biological material or the collection of health-related personal data, and which:

a. requires inpatient treatment not envisaged in the protocol or extends a current hospital stay;

b. results in permanent or significant incapacity or disability; or

c. is life-threatening or results in death.

The project lead must notify the Ethics Committee via BASEC within 7 days and explain the circumstances.

4.4 Radiation

N/A

4.5 Amendments

Substantial changes to project set-up, the protocol and relevant project documents acc. to HRO Art.18 must be approved by the Ethics Committee before being implemented. Exceptions are measures which have to be taken immediately in order to protect participants.

4.6 End of project

Upon project termination the Ethics Committee is notified within 90 days.

4.7 Insurance

N/A

5. FURTHER ETHICAL ASPECTS

5.1 Overall ethical considerations

The criteria are based on the latest international scientific knowledge and correspond to the best practice criteria of the Medical Society for Endocrinology and Diabetology.

5.2 Risk-Benefit Assessment

There are no additional risks, costs or inconveniences for the patient. Written patient information about the project is provided for submission. The project serves to implement the best practice criteria in primary care, which should ultimately lead to an optimization of the treatment of diabetes patients.

5.3 Rationale for the inclusion of vulnerable subjects

N/A. No vulnerable patient groups are included.

6. QUALITY CONTROL AND DATA PROTECTION

6.1 Quality assurance

The involved documenting personnel are trained for quality assurance purposes. Data monitoring in the sense of an industrial study is not planned and not possible, but a regular plausibility check in the sense of descriptive statistics is carried out. This is carried out centrally by the study coordinator.

6.2 Data recording and source data

The patient data is entered in encrypted form: Only the patient's gender and year of birth are entered. Central data analysis does not allow any conclusions to be drawn on the names of patients. For quality assurance purposes, a patient number is listed which could be used for queries to the practice in the event of inconsistencies in the entry (e.g. invalid value entry). The patient number is password-protected and can only be accessed by the staff of the corresponding practice. The number corresponds to the patient file in the practice, i.e. the medical assistant assigns the patient number in the documentation or takes it from the patient file.

The data recorded in the software is stored in a cloud of the independent hosting company Atos (www.de.atos.net/de-de/home.html) in D-Fürth. The patient data is only accessible to the physician (and his practice staff). The data backup is secured in accordance with the European Data Protection Act and complies with Swiss data protection regulations.

Project data will be handled with uttermost discretion and is only accessible to authorised personnel who require the data to fulfil their duties within the scope of the research project. On the CRFs and other project specific documents, subjects are only identified by a unique subject number.

6.3 Retention and destruction of study data and biological material

The study data is stored for 10 years in the study coordination office and then properly destroyed.

7. FUNDING / PUBLICATION / DECLARATION OF INTEREST

The QualiCCare association is financed by membership fees, which are used for the project management and standard operation of the association. For this project, Sanofi SA, a member organization of QualiCCare, made an additional payment to the QualiCCare Research Fund. The diabetes management tool eQuality from emminens of Roche Diabetes Care will be made available free of charge to the participating primary care practices for data collection. Since the evaluation of this tool is defined as a secondary endpoint of the study, an evaluation questionnaire must be answered in return.

The scientific advisory board is independent in its decisions and has no conflicts of interest. A contact to the sponsors takes place within the framework of an annual sponsoring board, where the sponsors are informed on the course of the project.

After completion of the project, a publication is planned, naming the sponsors.

8. REFERENCES

(1) Ordinance on Human Research with the Exception of Clinical trials (HRO)

http://www.admin.ch/opc/en/classified-compilation/20121177/201401010000/810.301.pdf

(2) Human Research Act (HRA)

http://www.admin.ch/opc/en/classified-compilation/20121176/201401010000/810.305.pdf

(3) Declaration of Helsinki (http://www.wma.net/en/30publications/10policies/b3/index.html)

9. GLOSSARY OF ABBREVATIONS

BASEC Business Administration System for Ethical Committees

CRF Case report form

EC Ethics Committee

FOPH Federal Office of Public Health

GCP Good clinical practice

HRA Human Research Act

HRO Ordinance on Human

ICH International Conference on Harmonization