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The impact of electronic feedback reports on the quality of care for chronic conditions in general practice

Submission date
29/12/2023

Recruitment status
No longer recruiting

Registration date
09/01/2024

Overall study status
Completed

Last Edited
10/06/2025

Condition category
Other

[_] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[_] Results
[_] Individual participant data
[_] Record updated in last year

Plain English summary of protocol

Background and study aims
Chronic conditions affect a large proportion of the Swiss population, and general practitioners (GPs) play a central role in their care. Improving the quality of care has recently been the focus of several Swiss health policy initiatives involving various stakeholders.
Feedback reports (FBRs) based on the data generated by the GPs' own routine practice have shown great potential to effectively improve the quality of care for individual conditions such as diabetes or high blood pressure. However, it is unclear whether FBRs can also improve the overall quality of care for a wider range of chronic conditions in general practice. The aim of this study is to investigate the effectiveness of an electronic FBR containing information on performance on several quality indicators (QIs) on the quality of care for chronic conditions in Swiss general practice.

Who can participate?
We will conduct the study among GPs in the Family medIcine Research using Electronic medical records (FIRE) project of the Institute of Primary Care of the University of Zurich. GPs practising in Switzerland and using electronic medical records from different software companies can participate in the FIRE project. All data in the FIRE database are completely anonymised at the patient level.

What does the study involve?
Participating GPs will be randomly assigned to two groups. One group will receive an electronic FBR containing information on the performance with respect to 14 QIs related to different chronic conditions every two months for one year. The other group of GPs will receive a simpler FBR containing only summaries of consultation frequency, medication prescriptions, and laboratory tests. Both FBRs will be generated from data automatically extracted from the GPs' electronic medical records into the FIRE database.
The QIs included cover conditions commonly seen in primary care, such as high blood pressure, diabetes, asthma, or kidney disease. Each QI focuses on a specific patient population and a

specific process or outcome of care that should have occurred over a given time period. For example, one of the QIs assesses whether patients with kidney disease have received appropriate laboratory tests to monitor their kidney function in the last year.

What are the possible benefits and risks of participating?
Participating GPs can benefit from receiving regular, individualised feedback on the care they provide, including benchmarking with their peers. Patients of participating GPs may benefit from improved quality of care. As electronic FBRs have been shown to be effective and safe interventions, no risks are expected.

Where is the study run from?
The study will be conducted by the Institute of Primary Care of the University of Zurich in Zurich, Switzerland.

When is the study starting and how long is it expected to run for?
The first FBRs will be sent to the participating GPs in January 2024 and the last in May 2025. The total study duration is therefore expected to be 17 months.

Who is funding the study?
The study is funded by a grant from the Federal Quality Commission (Eidgenössische Qualitätskommission), an extra-parliamentary expert commission that supports the Swiss Federal Council in promoting quality in healthcare.

Who is the main contact?
Prof. Jakob M. Burgstaller, MD, DMD, PhD, EMBA, jakob.burgstaller@usz.ch

Contact information

Type(s)
Public, Scientific, Principal investigator

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Study information

Scientific Title

The effectiveness of quality indicator-based electronic feedback reports on the quality of care for chronic conditions in Swiss general practice: a randomised controlled trial

Study objectives
Sending regular electronic feedback reports (FBRs) to general practitioners (GPs) on their performance on specific quality indicators (QIs) effectively improves the quality of care for patients with chronic conditions.

Ethics approval required
Ethics approval not required

Ethics approval(s)
As all patient data collected in the study will be fully anonymised, the Cantonal Ethics Committee Zurich has waived approval in accordance with the Federal Act on Research Involving Human Beings (BASEC-Nr. Req-2023-01069).

Primary study design
Interventional

Study design
Two-arm randomized controlled trial

Study type(s)
Efficacy

Health condition(s) or problem(s) studied
The impact of electronic feedback reports on the quality of care for various chronic conditions commonly seen in general practice: diabetes mellitus, arterial hypertension, coronary heart disease, atrial flutter/fibrillation, asthma, chronic obstructive pulmonary disease, chronic kidney disease.

Interventions
We will recruit participants from the GPs registered in the Family medIcine Research using Electronic medical records (FIRE) project of the Institute of Primary Care hosted by the University of Zurich. The FIRE project is a database of electronic medical records from GPs in German-speaking Switzerland that was established in 2009. The data are fully anonymized on patient level and include consultations, medication prescriptions, reasons for encounters (coded according to the International Classification of Primary Care system, ICPC-2), problems and diagnoses (mapped to the International Classification of Diseases system, ICD-10), laboratory tests, blood pressure readings, and biometric data (height and weight).
Recruitment and randomisation of GPs will take place in three rounds just prior to three possible study starts on 1 January 2024, 1 March 2024, or 1 May 2024. GPs in the FIRE project will be eligible if they are board certified in either general internal medicine or general practice and if they have been working in their practice for at least one year prior to the respective study start. Eligible FIRE GPs will be automatically enrolled in the study. They will be informed by email and will have the opportunity to decline participation before randomisation.

We will compare a comprehensive electronic FBR containing detailed, individualised information on the participating GPs' performance on selected QIs (QI-FBR), including peer benchmarking, with a plain FBR (P-FBR) containing summaries of patient demographics and of selected care events (such as frequency of consultations, laboratory tests, blood pressure readings). Both

FBRs will be derived from the participating GPs' electronic medical records and will be delivered electronically every two months for one year (six FBRs per GP), each containing information for a 12-month assessment period prior to the respective time of delivery. The QI-FBR will include the performance on 14 QIs in the four domains of endocrine, cardiovascular, pulmonary, and renal conditions, defined through an iterative process of literature reviews, domain specialist consultations, and GP panel discussions.

Intervention Type
Behavioural

Primary outcome(s)
For each GP, we will calculate an overall performance score (OPS), derived from their performance on the 14 QIs included in the QI-FBR. We will calculate the OPS at two points in time: before the first FBR is delivered (baseline), and after the last FBR has been delivered (end of study). The primary outcome measure will be the change in OPS between baseline and end of study

Key secondary outcome(s)
Four domain-specific performance scores (DPSs) derived from the GPs' performance on the QIs belonging to the four different chronic condition domains (endocrine, cardiovascular, pulmonary, and renal), change baseline and end of study

Completion date
30/04/2025

Eligibility

Key inclusion criteria
GPs registered in the Family medIcine Research using Electronic medical records (FIRE) project of the Institute of Primary Care hosted by the University of Zurich

Participant type(s)
Health professional

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Total final enrolment
117

Key exclusion criteria

1. GPs in the mediX general practice network, as they will receive electronic FBRs tailored to the specific needs of the network
2. GPs whose practice will fail to export information relevant for QI performance assessment to the FIRE database

Date of first enrolment
01/01/2023

Date of final enrolment
30/04/2024

Locations

Countries of recruitment
Switzerland

Study participating centre
University Hospital Zurich, Institute of Primary Care
Pestalozzistrasse 24
Zurich
Switzerland
8091

Sponsor information

Organisation
University Hospital of Zurich

ROR
https://ror.org/01462r250

Funder(s)

Funder type
Government

Funder Name
Federal Quality Commission (Eidgenössische Qualitätskommission)

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated and/or analysed during the current study will be published as a supplement to the results publication.

IPD sharing plan summary

Published as a supplement to the results publication

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Protocol article		21/11/2024	22/11/2024	Yes	No