



Examples of Case Study

Czech Republic

Examples of Case Study

A Summary

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Summary:

General practice is recognized as a specialty in its own right since 1978 it has its own postgraduate curriculum and system for continuous education. General practitioners are working as independent private providers of primary care, reimbursed by a combination of per capita and fee for service payment system. The majority works in single handed practices (95%) while the rest of the approximately 5000 GP's is working in group practices or in outpatients clinics.

Since 2000, the Government of the Czech Republic adopted a National Quality Policy based on a decree, which has defined the methods to improve the quality of products services and activities. The main objectives of this decree were

- The development of national accreditation system
- Assurance of quality in public services
- Standardization of staff training and retraining
- Creation of a system of quality assurance

In the same year the Ministry of Health founded the Czech Republic Quality Council to coordinate the health related elements of the national quality policy. Licensing of professionals and facilities is the responsibility of the Medical Chamber which is also responsible for the continuous education and retraining of practicing doctors. The society of



General Practice is a strong body under the umbrella of the Medical Chamber which plays a crucial role in both the education of GP's and quality improvement initiatives in primary care.

As a result, the Society develops 5-10 practical guidelines annually and disseminates information via electronic and print media to its members as well as organizes workshops and seminars to train GP's in the use of guidelines in their daily practice. This activity is supported by the Primary Care Research Fund which was created in 2001 to provide an ongoing source of funding for research, innovation and quality improvement. In addition to this, the Society of General Practice has obtained several grants in the past several years to strengthen the evidence base of the work of its membership.

While the quality movement in general practice is slightly lagging behind that of the secondary-tertiary level in the Czech Republic, significant strides have been made in recent years to address the issue of raising patients expectations, growing diseases burden due to non- communicative diseases and the demographic and socioeconomic changes in the primary care setting. The pressure on GP's for greater and better quality of care is growing and they can only keep pace with these expectations in the increasingly borderless Europe by adopting international quality standards to their local context, based on a nationwide consultation process.

The following case studies represent two examples of successfully implemented QI programs in the field of Cardio Vascular Disease (CVD).



Czech Republic

Examples of Case Study

Case Study One

1. **Title:** Study on Cardiovascular Disease Prevention in General Practice.

2. **Purpose:** The primary goals of the project were the description of prevalence of risk factors for cardiovascular disease (CVD) in high-risk patients and attempt to maximize the risk reduction by optimization of treatment in General practice.

3. **Background:** Cardiovascular disease represents the highest disease burden and the leading cause of death in the Czech republic, reaching one of the highest rates in the industrialized world. Despite their proclaimed goals, prevention campaigns were less effective in the past. Prevention of cardiovascular disease can be successful in reducing the incidence and mortality only on condition that the endeavor of the public health system is combined with a well functioning service of general practitioners and family physicians. The nationwide model of prevention should be translated into practice and should improve, mainly by redefining the dietary habits and smoking cessation programmes as well as the risk profile of the entire population. Even a minor change in the risk profile in the whole population has society-wide implications and entails a significant decrease in the number of clinically manifest cases of the disease. While secondary prevention after myocardial infarction will continue to be the responsibility of the cardiologist, individualized intervention in persons at high risk, as part of primary prevention, can be provided generally by the general practitioner and the family physician. Successful prevention depends on the standard and education of the general practitioner on the one hand, and the performance of public health system on the other.



4. Preparation of the project: The project assessing the efficacy of a complex approach to cardiovascular risk reduction in primary care was conducted by 464 physicians in the entire Czech Republic between 2006 and 2007.

Within five visits the patients were carefully followed and their risk factors were treated using lifestyle and pharmacological intervention.

The main focus of the project was management of dyslipidemia and arterial hypertension. Basic anthropometric and laboratory data were collected including serum lipids, glycemia, kidney and liver function tests, CVD risk was assessed using SCORE charts. 4,427 patients were included in the project (2,372 men), average age 62.9 +/- 10 years.

5. Project realization: The study found modest improvements in patient health and self-management advice given within intervention groups, as well as modest, but significant improvement in the structural aspects of self-management and professional performance. The effects persisted for at least 12 months after the intervention was complete.

6. Discussion: Optimization of treatment of dyslipidemia resulted in a significant decrease of both total and LDL-cholesterol levels by 23 and 28%, respectively, HDL-cholesterol concentrations increased by 4.5% and levels of triglycerides declined by 22%. Improved management of arterial hypertension was accompanied by a decrease of average blood pressure from 152.5/90.5mm Hg to 132.5/80.2mm Hg. Average fasting glycemia was lowered by 0.4 mmol/l while body mass index and waist circumference decreased by 0.6 kg/m² and 2.5 cm, respectively. All differences between baseline and the last visit were statistically significant ($p < 0.001$). Pharmacotherapy indicated during the project was well tolerated and occurrence of side effects was minimal. The project documents the complex approach to patients at high-risk of CVD including lifestyle intervention with effective combination of lipid-lowering drugs and antihypertensive drugs brings additional significant lowering of CVD risk. Application of modern, evidence-based approaches to treatment of dyslipidemia and arterial hypertension in everyday practice is possible, effective and feasible.

Czech Republic

Examples of Case Study

Case Study Two

1. **Title:** Partnership with Patients Approach to the Practical Implementation Recommended Procedures on Smoking Cessation in General Practice.

2. **Purpose and method:** The Purpose of the project was to promote a partnership approach to smoking cessation as a means to reduce cardiovascular risk and improve the quality of prevention in a primary care practice setting. The project uses the method of self-audit of medical records to determine the percentage of routine recording of smoking status by the GP and the frequency and effectiveness of smoking cessation education visits and follow up questions during regular checkups.

3. **Background:** Smoking is one of the four main risk factors responsible for morbidity and mortality due to cancer, Cardiovascular, respiratory, and neonatal diseases globally. According to a review by Sovinova et al (2007) the overall estimate of the contribution of smoking to the total annual mortality in the Czech Republic is estimated as 20,550 deaths in 2002 corresponding to 19% of all deaths in that year. Most deaths (a total of 11,364) is attributable to cardiovascular disease. Research work concerned with trends of smoking in the population suggests that the prevalence of smoking during the last ten years stagnates in adults with a slight decrease in men and corresponding increase in women but is increasing among adolescents. These findings speak to the necessity of more intense and effective efforts to health promotion, prevention and smoking cessation in General practice along with legislative measures that reduce access to tobacco products by youth and children.

4. **Preparation of the project:** Clinical audit of GP's medical files was performed to analyze the number and frequency of recording of the patients' actual smoking status as well as the



number and frequency of preventive/ educational encounters re smoking cessation before 2005 and after 2005. The approach to education and counseling prior to 2005 and after 2005 was compared as well as the effectiveness of the approach in terms of sustained behavioral changes achieved.

5. Project realization: The audit found that before 2005 in only 15% of the visits has the smoking status been recorded within prevention examinations. Records on smoking cessation /prevention: A.) Were not included in the scope of prevention examination; B.) Were included only in the event of respiratory symptoms, complaints or complications; C.) Were not included in the case of other diseases such as cardiovascular disease. Following this approach there were only a few patients who gave up smoking in 12 years of the reviewed period (0.25p.a.).

After 2005 records indicated the smoker status in 83% of patients; records on preventive and smoking cessation education have been routinely included in preventive visits with entries indicating the sustainability of behavioral changes achieved. Records of patients, who sustained their smoke free status were marked with color code to alert the GP to discuss it with his/her patients every consultation. The rate of patients giving up smoking increased to 4 p.a. in the two years since 2005 amounting to a sixteen-fold improvement.

6. Discussion: Given the clear evidence of the effect of smoking on high cardiovascular, mortality and morbidity, the fight against smoking is an essential part of medical prevention in general practice. The success of anti -smoking interventions depends on many factors including societal and cultural norms, legislation, health awareness of the population as well as the effectiveness of healthcare workers preventive efforts, particularly in the primary care setting. In the Czech Republic the general public is relatively well informed regarding the harmful effects of smoking, however the efforts aimed at reducing smoking has not been backed by legislation. Guidelines for GP's on effective ways of promoting smoke- free behaviors or assisted smoking cessation did not exist before 2005, thus impacting the frequency, quality and effectiveness of these interventions .The methods of working with smokers is determined by the doctor –patient relationship. Until the early 1990's the prevailing approach to the doctor patient relationship was that of a paternalistic one. E.g. the



doctor was giving instructions and the patient was supposed to obey, otherwise he/she was blamed for non-compliance and even might have been threatened to be charged for the extra costs of the treatment of the complications of their conditions. The methods of working with smokers until recently have been left to the individual GP's own devices, depending on his/her experience, skills and individual preferences. The introduction of a "Recommended Procedure" for smoking cessation which was piloted in 2005 in the Czech Republic has offered a selection of evidence based interventions that can be used by general practitioners to improve the efficiency of their preventive work. While the long term impact of this program on the health of the population in the Czech Republic remains to be seen, the new model of partnership between the GP and the patient along with the range of interventions offered by the guidelines has the potential to substantially alter the way GP's operate in this field.



Poland

Examples of Case Study

Case Study One

1. **Title:** School of Peer-review Groups Tutors in Family Medicine

2. **Purpose and method:** The purpose of this case study is to present a broad initiative aimed at training of cadres for peer-review groups of family physicians in Poland.

The method to prepare this case was: (1) an analysis of the reports, review of the training programme and materials as well as journal publications, describing the initiative, (2) interviews with organizers, lecturers and participants of the school, (3) author's own experience as a teacher involved in the program.

3. **Background:** Peer-review groups are widely recognized as effective interventions, leading to the continuing improvement of health care services provided by family physicians. Experiences of many Western European countries, especially Ireland, UK, The Netherlands, Denmark or Germany, are positive examples of their implementation. Since the beginning of nineties of the last century, Poland is building new, modern model of primary care with the pivotal role of family physicians in it. The implementation strategy developed and accepted in the middle of nineties, foresaw focus on quality of services provided by family physicians to their patients. However any practical means for it were neither proposed nor implemented from the governmental level.

Professional organization of GPs – the College of Family Physicians in Poland was established in 1992 in order to develop the discipline. Growing slowly from 34 members at the beginning to over 5 thousands in 2010 the College was undertaking several initiatives to strengthen different mechanisms leading to the improvement of quality of care, provided in



PHC settings. As an example development, publication and implementation of various clinical guidelines can be mentioned.

Introduction of family medicine to PHC in Poland was assisted by privatization and setting up relatively high number of single handed practices or small health centers with two or three doctors only. Isolation in which they worked quickly revealed the need for integration and exchange of information between them on more regular basis. The College noticed it as an opportunity to attract physicians' attention to the peer-review meetings as a tool which may answer the needs of integration, but in the same time influence the quality of care.

To start the programme the College was seeking governmental or commercial support for this initiative. Although the potential interest was widely declared, it was not followed by any firm and concrete, especially financial support. Unexpectedly many family physicians declared not only the interest in the proposed programme, but also the readiness to cover all necessary costs of training. In this situation, the College found a private consulting company interested in organization of the school. The College took responsibility for development of the strategic concept, the curriculum and enrollment of teachers, while the company secured all other organizational means, including accommodation, training materials and facilities, enrollment of participants and exchange of communication.

4. Preparation of the project: The experts group to prepare the general concept of the school was appointed by the College. The members of the group had their own previous experiences in this field from the observation of similar initiatives abroad. Some of them completed also relevant training provided by NGOs or university departments in Western Europe having wide experience in this field. Moreover some of them were regularly participating in the international meetings of experts in QI in family medicine (EQUIP). The draft teaching programme has been developed and the school coordinator was appointed by the group. Potential educators for particular teaching interventions were also identified. The concept of the school was presented and discussed during one of the annual scientific meeting of the College and finally approved by its council.



5. Project realization: The project has started in 2000, when first group of 102 physicians were enrolled to attend level 1 course. The first group extremely positively evaluated their

experiences and declared interest in the continuation of the training. This positive information was spread quickly and demands for new courses have been expressed. So, in 2001 57 physicians started new edition of the training, while previous year graduates were offered possibility to attend level 2 course. This situation was repeated 5 times and 4 levels courses were developed and offered. In total 270 physicians completed the school on different level of training.

As a natural consequence of training some regular groups have been started. Most of them were created on the basis of enthusiasm of the school participants or even with the framework of participation conditions. The College took several efforts to guarantee sustainability of the outcomes, proposing different solutions to the decision makers in order to attract physicians to the peer-review process. The whole idea of internal quality improvement found very little understanding of the decision makers, who believed mainly in external control.

Being aware of the above situation the College started to seek for an alternative solution, which might use the potential of trained tutors. In 2009 new project has been developed, aimed at activation of peer-review groups. The College has designed the working programme for peer-review groups and found potential external sponsors for it. The sponsors were recruited mainly from pharmaceutical companies. However they had no impact neither on programme contents nor on actual performance. The sponsors gave the grants to the whole programme not to the particular interventions. All the groups were free to make their own choices and realize meetings according to their needs. In 2009 – 2010 altogether 40 groups were started all over Poland with 331 doctors belonging to them. Again the experience was positively evaluated by physicians, the College and the sponsors. Currently the efforts have been undertaken to continue the programme and to increase the number of groups and participating in their work physicians.



6. Discussion: This case study presents an initiative of QI enthusiast, who developed and introduced on the country level long term lasting and sustainable project. Following best available international examples the training programme for leaders of peer-review groups have been designed and implemented. The initiative was so sound, that attracted several

hundred family doctors, first to attend the training in order to extend the knowledge and skills in quality improvements and secondly to form peer-review groups, systematically working on the internal quality improvement process. It is worthwhile to stress, that the whole project was only possible due to enthusiasm of few pioneers and structural support of the College of Family Physicians in Poland. Any governmental agencies or institutions didn't provide methodological, organizational or financial support to the project. Moreover physicians who decided to attend the school or afterward to participate in the peer-review process didn't receive any incentives or even formal recognition of their efforts. The College of Family Physicians in Poland several times proposed the change in legislation, allowing the physicians participating in the peer-review process to get some administrative facilitations to make work easier. Unfortunately all these appeals remained unanswered. Although acting without any formal support from the health care authorities, the initiators of the school attracted relatively large number of physicians and successfully attracted their attention and involvement for several years. The moral support of the College and organizational efforts of the private consulting company were other key elements of success for the project.



Poland

Examples of Case Study

Case Study Two

1. Title: The educational programme on health promotion and cardiovascular diseases prevention for family physicians and nurses in Poland.

2. Purpose and method: The purpose of this case study is to present activities whose aim was to improve preventive care of cardiovascular diseases provided by primary care doctors and nurses in Poland. The method to prepare this case was: (1) an analysis of the official report from the programme realisation, (2) interviews with teachers and trainees, (3) author's own experience as a teacher involved in the program.

3. Background: Cardiovascular diseases (CVD) are the leading cause of death in the EU, affecting millions of people. Mortality rates vary considerably between European countries and show a clear West-East gradient, lower in Mediterranean countries and higher in Eastern Europe (Kromhout D, 2001). The lowest rates (age-standardized CVD mortality) are found in France (females 110), the highest rates in Russia (males 1150) (Deckert A, 2010). In Poland it is 500 for females and 600 for males. Approximately 50% of these deaths are from CHD and additional 25% from stroke.

“POLKARD – a National Programme of Cardiovascular Diseases Prevention and Treatment for the years 2006-2008” was introduced in Poland by the central government. One of the aims of this programme was to decrease cardiovascular mortality and morbidity through the implementation of the most modern health promotion and disease prevention activities in primary health care.

To realize this aim, the Ministry of Health prepared and announced an opened tender procedure for institutions willing to organize special courses for family physicians and nurses.



Finally, in July 2008, an agreement for the realization of the project was signed with a consortium created by the University Hospital in Krakow, Medical Universities in Warsaw

and Gdansk, the Institute of Food and Nutrition, and two non-government organizations: the College of Family Physicians in Poland and the Polish Forum on Cardiovascular Disease Prevention.

4. Preparation of the project: Experts delegated by the Consortium's partners prepared a 2-day course for primary care professionals. The general objectives of the course were to: (1) extend knowledge, skills and competences of physicians and nurses in health promotion as well as primary and secondary prevention of CVD, (2) prepare primary care professionals to plan and deliver preventive care independently, and (3) improve the quality of preventive care in practice settings. All together, the course was planned for 2 days and consisted of 12 sessions, 1 hour each. Briefly, sessions were devoted to the following topics: (1) introduction, (2) health promotion and prevention of CVD, (3) risk factor assessment, (4) hypertension, (5) diabetes mellitus, (6) smoking, (7) obesity, (8) physical activity, (9) dyslipidemia, (10) nutrition, (11) patients education, and (12) a summary. Mostly traditional, teacher-centered methods were developed (lectures, presentations) with little emphasis on didactic interactive methods, discussions and individual or small groups activities.

The courses were piloted with a group of 12 doctors and 14 nurses. Feedback from the participants was collected and a revised version of the courses and comprehensive educational materials were prepared.

5. Project realization: The next step in the programme was to train teachers to run the courses in each region in Poland. Through September 2008 special two-day courses for teachers were prepared and organized in Krakow and Warsaw. Altogether, 64 family doctors who had experience as postgraduate trainers participated in the courses. In such a way 16 teams, composed of 4 persons (1 team for each region in Poland) were created.



They were equipped with support materials and the detailed education programme, which should be provided for physicians and nurses in primary care. Primarily, the materials consisted of slides for lectures, description of exercises, readers and handouts. They also received two sets of multiple-choice tests with 30 questions each, which had to be completed by each participant at the beginning and the end of the course.

Information about the possibility to participate in the courses was provided to physicians and nurses. After a recruitment process, the courses started and continued between October and December 2008.

Sixteen courses (1 in each region) were organized and a total of 456 physicians and 437 nurses participated in them.

During the introduction and summary sessions, each participant completed a multiple-choice test with 30 questions. The physicians' mean number of correct answers was 17.3 before the end and 20.2 after the course. Respectively, the correct answers of nurses were 12.8 and 16.9.

At the end of the courses, participants anonymously assessed different issues related to the quality of the courses provided. On a scale of 1-5, the average number of points in a specific category was as follows: (1) course organization: 4.69, (2) relevance to practice: 4.68, (3) course materials: 4.66, (4) course provision: 4.58.

6. Discussion: This project presents a very traditional approach to quality improvement in primary care in the country where family medicine is a relatively new specialty and physicians, administrators, and public payers have experience mainly in external quality assurance methods, while internal quality improvement activities are organized only by enthusiasts and in a small scale (practice level).

Continuing medical education (CME) courses on health promotion and CVD prevention were provided for physicians and nurses. It was presumed that a shortage of knowledge in these



areas might have existed. This thesis was supported by the results of the introductory tests completed by the course participants. After two days of training, knowledge increased but probably at a lower level than the courses' organizers expected. For managers of traditional CME events some alternative solutions, typical for adults learning principals, can be proposed such as self-directed learning with increasing interactivity, effective learners needs availability at workplaces rather than at remote sites.

Although CME interventions are recommended to be used to improve physicians or nurses' knowledge and skills, there has been a debate and widespread skepticism about their effect on the performance and quality of care in the practice settings (Grimshaw JM, 2004; Davis D 2009).

Activities intended to improve the quality of care should include the assessment or evaluation of the quality of care; identification of problems or shortcomings in the delivery of care; designing activities to overcome these deficiencies; and follow-up monitoring to ensure effectiveness of corrective steps. The presenting project did not complete all the requirements for a quality improvement project and focused only on physicians' and nurses' education. Policymakers should search for strategies that lead to real quality improvement and better clinical outcomes. CME developers and teachers should strive to evaluate activities at the highest level possible not only for satisfaction, but effectiveness and resulting outcomes in practice.



Slovenia

Examples of Case Study

Case Study One

1. Title: Nationwide program on Primary Prevention of cardiovascular diseases in Slovenia

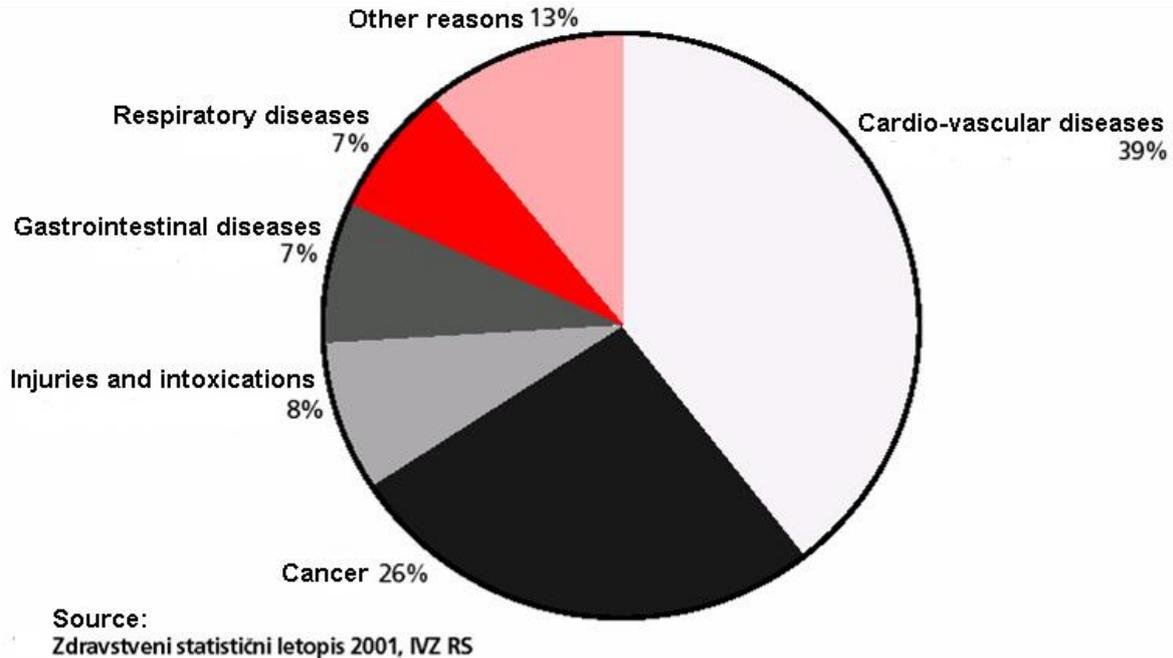
2. Purpose and method: The purpose of this case study is to present activities and first results of a nationwide program on primary prevention of cardiovascular diseases (CVD). The aims of his program are:

- early identification and management of people with high risk for CVD and other chronic diseases and
- lowering of early morbidity and mortality due to CVD and other chronic diseases.

The methods to prepare this case study were: presentation of the nationwide program of cardiovascular disease prevention, presentation of the results of the first five years of the program and presentation of authors' own experiences as a practicing family doctors participating in the program.

3. Background: Chronic non-communicable diseases, especially cardiovascular diseases and cancer are important health problems in developing countries. Many risk factors are involved in the development of these diseases, i.e. genetic and life-style risk factors, such as unhealthy diets, risky alcohol consumption, physical inactivity and overweight.

Cardiovascular diseases are the leading cause of death in the EU, affecting millions of people. In Slovenia in 2001, when this program was started, 39% of people died from cardiovascular diseases.



Graph 1: The cause of death in Slovenia in 2001, both genders, all ages

Costs for the management of cardiovascular disease in 2006 in 27 countries of EU were 110 billiards Euros. That means 10% of all health care costs or 223 Euros per citizen.

Due to the huge impact on the length and quality of life and health care costs, we started with the national program on cardiovascular disease prevention in 2001. The aims of the project were early identification and management of people with high risk for cardiovascular and other chronic diseases and lowering of early morbidity and mortality due to CVD and other chronic diseases.

To achieve these goals, Ministry of Health of Slovenia in cooperation with National Health Insurance Company introduced this program to family doctors. Family doctors are the key persons in this program. They are in charge of performing preventive examinations of adult population and regularly reporting of their work to the National Insurance Company and Ministry of Health. The participation in this program is mandatory for all family doctors taking care of adult population.



4. Preparation of the project: Ministry of Health is a coordinator of the project, which fully started in 2002. At the beginning of the project, family doctors and practical nurses got extended knowledge in health promotion as well as primary and secondary prevention of CVD. They also prepared forms with the help of family doctors who should perform preventive visits and report about the results.

Professional bodies from different fields also helped family doctors to implement preventive program into daily practice. They were organizing lectures and workshops about the value of prevention and helping with advices about how to overcome the barriers in implementation of preventive program.

Criteria for inclusion in preventive program:

- Age, gender of the patient from the list:
 - men: 35-65 years old,
 - women: 45-70 years old.
- Family history (all age groups)
- With family hyperlipidemia
- With early coronary illness or death (male relatives before 55 years of age, female relatives before 65 years of age)
- Diabetes mellitus (all age groups)

Activates of the preventive program

- Evaluation of health status of the patient
- Assessment of risk factors
- Calculation of 10- year global risk for cardiovascular disease
- The risk has to be recorded in a medical chart of the patient
- Inclusion of the patient in the register of patients with increased risk
- All patients with assessed cardiovascular risk of 20% or higher and others who show interest are invited to the health educational workshops led by a graduated nurse



Report system

- Every office sends the report about the number of finished preventive examinations to the regional office of National insurance company
- The data from preventive examinations are collected in universal template personal computer software. This is sent to the central data base – register of the persons, which are in risk of cardiovascular diseases
- Every physician has to report the results regularly, once per month

Organization of the program

- Led by Ministry of Health
- Coordinated by 11 regional coordinators
- Local and regional promotion – preventive groups prepare the region for the implementation of the program
- Providers of the program are personal family physicians
- Network of 61 health–education centres, appointed by Ministry of Health for interventions
- Paid through the National insurance Company to the providers

5. Project realization: The project was started in 2002 and is still going on. All family doctors in Slovenia, working with adult population are included. During that time, the content of the program was modified a little: according to the guidelines about prostatic cancer, additional parameters (PSA) were included for observation.

After the first five years of the project, the analyses of the results were made. According to the registry of individuals with high cardiovascular risk, the prevalence, higher than 20% of global risk among Slovene adults was 22.9%. Prevalence of risk factors among people from the register of people with high risk for cardiovascular diseases was as follows: 67.2% of people had positive family history on cardiovascular diseases, 22.5% of people were regular smokers, 8.6% of people had risky alcohol consumption, 46.6% of people were physically inactive, 70% of people were overweight, 35% of people had hypertension and 27% of people had diabetes.



High prevalence of risk factors showed us that preventive programs and health promotion in the country were really needed.

6. Discussion: The project was introduced in 2001 and much effort from all partners involved was needed to start the project. After almost 10 years, despite a huge resistance of family doctors at the beginning, we are satisfied with the efficiency of the program. We started to screen the population on the presence of risk factors for cardiovascular disease and started to help them before the risk factors lead to the disease.

There are many limitations of the project, which should be addressed in the future:

- Inclusion criteria in the project should be changed. We should include also younger adults who more and more often have unhealthy lifestyle, which could lead to risk factors or disease.
- Workload of the health care workers in primary care is now extremely high due to the lack of family doctors and aging of population. The preventive program didn't change the amount of curative programs and the number of visits is now much higher than before the era of systematic preventive program.
- Only the patients with assessed cardiovascular risk of 20% or higher were systematically invited to the preventive workshops. We should invite all target populations, regardless of cardiovascular risk, to the educational program.
- Information technology should be used also to improve our preventive activities (i.e. e-counselling, mass media)
- Program activities should be adapted according to the new evidence. Some of the recommendations were changed in 10 years and refreshing course should be organized for the family doctors and nurses.

The preventive program usually needs many years to provide some results. The efficiency of the program should be assessed in the upcoming years.



Slovenia

Examples of Case Study

Case Study Two

1. Title: Nationwide program on Diabetes 2010-2020

2. Purpose and method: The purpose of this case study is to reduce mortality due to diabetes and to improve quality of life in patients with diabetes. We would like to reduce complications due to diabetes and foster research activities in the field of prevention and treatment of diabetes.

3. Background: Chronic non-communicable diseases, especially cardiovascular diseases and cancer are important health problems in developing countries. Many risk factors take part in the development of these diseases: i.e. genetic and lifestyle risk factors (unhealthy diets, risky alcohol consumption, physical inactivity and overweight).

Due to the sedentary lifestyle and unhealthy food, the percentages of overweight persons is increasing also in developing countries. These two problems were addressed a few years ago with the National program on healthy food and National program for physical activity to invigorate health.

The consequence of obesity is, in many cases, also diabetes type 2. Diabetes mellitus type 2 is one of the most important risk factor for cardiovascular disease and also causes micro vascular complications like retinopathy, nephropathy and neuropathy. The estimated prevalence of diabetes in Slovenia in adult population is about 6%, which means 125,000 people with diabetes.

In the field of cardiovascular disease prevention, we have a National program on cardiovascular disease prevention since 2002. The program consists of evaluation of the health status of the patients, assessment of the risk factors calculation of 10-year global



cardiovascular risk and inclusion of the patients with increased risk in the register of patients with increased risk.

Based on the results of the research about diabetes management in Slovenia in 2005/06, we found that there is a room for improvement. In many patients with diabetes, risk factors were not controlled adequately. They also found huge differences in quality of care between different health care workers and organizations.

In 2007, national guidelines on diabetes were published and distributed to all family doctors. All partners (clinical specialists in diabetes, family doctors, patients, organized in Slovenian diabetes Association) were getting together and organized Diabetes Forum and in 2009 Diabetes Society of Slovenia.

High prevalence and serious consequences of diabetes are not only health problems, but are also problems of the whole society. National program on diabetes is a strategic project, aimed to foster the cooperation between different partners in the society to restrain the epidemiology of diabetes.

4. Preparation of the project: Ministry of Health is a coordinator of the project, which was confirmed by the health authorities on the 8th of April 2010. National program on diabetes based on the cooperation between partners in health care and outside the health care. The aims of the project are:

- to reduce the prevalence of diabetes type 2,
- to prevent the disease or to move the beginning of the disease in higher age,
- to improve early detection of diabetes,
- to reduce complications of diabetes and mortality due to diabetes.

To reach all the aims of the project, the partners should perform different activities:

- Public health activities for promotion of healthy lifestyle. Promotion of healthy lifestyle should start in childhood. Primary schools are involved through the project of healthy schools.



- Project MURA – health as a priority of the region. Different activities for health promotion in a Slovenian region with the highest proportion of overweight people and the highest mortality due to cardiovascular disease.
- Promotion of healthy food through mass media. The target group is young people.
- Recognition of people at risk for diabetes and people with diabetes in its early stage. Preventive programs in primary care should be prepared. Pharmacist on the primary level of health care should be also included.
- Management of diabetes and other risk factors should be organized on the primary level of care for most of the diabetic patients. Quality of care should be high and the same for all patients.
- Good coordination of care between primary and secondary level of care enables quickly reachable care of high quality and safety.

5. Project realization:

The project started in 2010 and it is an ongoing project. Besides the partners, also family doctors, who have important position in this project, are involved. Family doctors are responsible for preventive programs of adult population. Preventive programs enable health promotion on individual level and early recognition of pre-diabetes and diabetes.

Family doctors are, according to the national program, responsible for treatment and prevention of complications of diabetes. Implementation of diabetes guidelines and strategies, written in National program on diabetes, is in progress. A whole day workshop was organized for family doctors to understand the value of organizational changes in the management of diabetes. It offers a comprehensive and practical approach to the management of diabetes in primary care.

The project “Reference offices” in primary care will start on the 1st of April 2011. The aim of this project is a better quality of care for patients’ through stimulation of family doctors for a high quality of care, based on clinical guidelines. Diabetes is one of the two chronic disease



(besides asthma and COPD), the management of which will be supervised using quality indicators.

6. Discussion: Organization of care for diabetic patients in Slovenia should be changed. Nowadays, care for diabetic patients takes place in the primary or secondary level of care with huge differences in quality of care between the doctors and health care organizations. The

result is a high number of patients with diabetes with suboptimal control of diabetes and other risk factors, higher cost of care due to frequent complication of diabetes, suboptimal quality of life and earlier death of patients with diabetes.

We believe that National program, which is coordinated by Ministry of Health and include many partners from different fields in the society, will improve prevention and treatment of diabetic patients in Slovenia.



The Netherlands

Examples of Case Study

Case Study One

1. **Title:** Short- and long-term effects of a quality improvement collaborative on diabetes management. L. MT Schouten, et al., *Implementation Science*, 2010, 5:94.

2. **Purpose and method:** The purpose of this study was to examine the short- and long-term effects of a QI collaborative on type 2 diabetes patient outcomes and professional performance, as well as structural improvements to chronic care management of this disease.

Controlled pre- and post-intervention studies assessed patient outcomes, professional performance, and structural aspects of chronic care managements from a baseline to 24 months. Six intervention sites developed QI collaborative (QIC) projects with a total of 1861 participating patients. These sites sought to overcome QI concerns unique to their practices with regards to providing better care for diabetes management. Nine control sites were identified for comparison. Assessment before, during, and after the collaborative project was performed on several effect parameters. Data was collected from medical records and patient survey, as well as data about structural improvements from provider surveys.

3. **Background:** Good long-term care for patients with type 2 diabetes is highly complex with increasingly complicated drug regimens, close monitoring, and ongoing self-management support necessary. The best care is provided when primary and specialist care providers can cross organizational boundaries and communicate fluidly about patient needs. This study observes what the short and long-term effects of regional collaborations have on patient outcomes, professional performance, and structural improvement.



4. **Preparation of the project:** Schouten, et al., first invited many diabetes providers in outpatient clinics and general practices nationwide to participate in the quality improvement collaborative (QIC). For each intervention site, a control site giving typical care was identified by matching the type of site, location, size, and teaching affiliations. 6 intervention sites and 9 control sites agreed to participate. Provider teams were then asked to hand out questionnaires and written consent forms to patients visiting the clinics in order to obtain a group of participating patients who could be tracked for the following 24 months. During the project, 4 national meetings were organized to share the most up-to-date information about diabetes care and methods for achieving improvement in a collaborative environment. Each team focused on their own specific routines or bottlenecks for improvement.

5. **Project realization:** The study found modest improvements in patient health and self-management advice given within intervention groups, as well as modest, but significant improvement in the structural aspects of self-management and professional performance. The effects persisted for at least 12 months after the intervention was complete.

6. **Discussion:** As the study showed a modest, but significant long-term effect on the areas reviewed, it suggests that QIC interventions can be effective for enacting improvement within primary care clinics and level 2 diabetes care.

Examination of the intervention vs. the control groups showed only a modest improvement by the intervention groups (after correcting for baseline scores). There several possibilities for this:

1. Especially low-scoring sites were more interested in participating in the QIC and therefore saw greater improvement in professional performance.
2. Where the quality of care is already good, there may be a ceiling effect for further improvement.
3. Changing diabetes management may be complex and making improvements over 12 months may generate insufficient energy to overcome institutional inertia.



4. The specific changes at each site were different, which would affect the type of improvements made.
5. During the QIC, diabetes became a national priority on the public agenda and control sites may have implemented small changes independently.
6. The study may have failed to measure all possible improvements, since focus was placed on the most widely used measurements of improvement.

With these limitations, QIC may only be cost-effective if the effects can be maintained. A two-year follow up showed that some improvements in patient health and professional performance measures had been maintained; promising for future QIC efforts.



Netherlands

Examples of Case Study

Case Study Two

1. **Title:** Quality of stroke prevention in general practice: relationship with practice organization. J.S. De Koning, et al., *International Journal for Quality in Health Care*, 2005, 17:1, pp. 59-65.

2. **Purpose and method:** To investigate the relationship between elements of practice organization related to stroke prevention in general practice, and occurrences of suboptimal preventative care preceding a stroke event.

Sixty-nine Dutch general practitioners in the Rotterdam region were questioned via postal questionnaire regarding elements of practice organization related to stroke prevention. These answers were retrospectively compared to data of cases of stroke from each practice. Experts graded the suboptimal factors against stroke cases to determine if suboptimal care may have played a role in the number of cases. All cases of stroke were adjusted to a single, most important characteristic in stroke patients: the presence of hypertension. In many cases suboptimal care was related to hypertension management.

3. **Background:** Stroke is the third leading cause of death and is a major cause of long-term disability in industrialized countries. Given that there are no effective treatments for most types of stroke, preventative strategies are of the utmost important to managing this disease. Since the 1990s, the Dutch Ministry of Health, Welfare, and Sports and professional GP organizations have advocated a more proactive approach towards cardiovascular disease prevention, the modernization of practice organization, and standardization of care. However, it has not yet been demonstrated whether structural adaptations in practice organization measurably improves the quality of general practitioner's preventative care delivery.



4. Preparation of the project: The study was conducted within the framework of an audit on the quality of stroke prevention. After approval from the local medical ethics committee, patients were identified and selected from two principle referring hospitals. 77 general practitioners were identified from the patients' records to receive the questionnaire.

5. Project realization: For some elements of practice organization, the experts found significant relationships between suboptimal care and cases of stroke. General practitioners who more often noted high risk patients on their charts, delegated follow-up visits, and followed hypertension guidelines were found to less often provide suboptimal care.

6. Discussion: This study suggests that there are some relationships between elements of practice organization and the quality of stroke prevention in general practitioner organizations.

The greatest limiting factor in this study is that the expert panel may have over- or underestimated suboptimal care due to their hindsight view of cases of stroke. Also, it remains to be seen if general practitioners overestimate their own record keeping practices when asked to provide information on records management activities.

Despite a limited pool of general practitioners to analyze, the study supports the assumption that policy initiatives to improve patient information systems, task delegation, and partnership can have a positive impact on the prevention of stroke. The audit study clearly showed room for improvement in preventative care, therefore De Koning, et al., recommend continued improvement in these areas. It may also be worthwhile to evaluate the quality of preventative activities regularly to ensure compliance with policies and initiatives.



Denmark

Examples of Case Study

Case Study One

1. Title: Data Capture in Danish general practice – automatic capture of quality data, starting with diabetes care

2. Purpose and method: The purpose is to collect data for quality development and also research - and to do so without causing the GP unnecessarily efforts in data registering and collecting.

In cooperation with the Research Unit for General Practice at the University of Southern Denmark, DAK-E – the Danish Quality Unit of General Practice – has developed an IT program – called Sentinel Data Capture – that automatically collects patient data from the GP's electronic health record system.

3. Background: As in all health care systems Danish general practice has good opportunities to strengthen preventive treatments and public health. In Denmark there is extensive use of IT for internal as well as external communication. The GP's role as a family doctor and as the gatekeeper to treatments by specialists and hospitals is seen as a major strength.

However, there is still a lack of documentation of the quality work in general practice due to a lack of data from the primary health care. Relevant research information also suffers from this.

In 2005, Data Capture on diabetes care in general practice was introduced at a larger scale through a common agreement between the Association of GPs (PLO) and the Danish Regions, the sector in charge of delivering tax-financed health care in Denmark.



4. Preparation of the project: Sentinel Data Capture is designed to collect key data as the data enter into the GP's electronic health record system. The collected data are prescribed drugs, National Health Service disbursement codes, laboratory analysis results and ICPC diagnoses. The data are stored in DAMD – Danish General Practice Database. Apart from his/her daily work the only additional activity the participating GP has to do is to assign an ICPC diagnosis code to all face to face patient contacts.

Each GP subscribes individually at his/her own PC to the projects in which he/she would like to participate. As for now the projects are Diabetes and COPD – and other special designed research projects. When the GP enters an ICPC trigger diagnosis a pop-up screen will appear and additional information has to be filled in. As for Diabetes, the pop-up screen only has to be filled in once a year in connection with the annual checkup. The rest of the data on the diabetes treatment is automatically collected and transferred to the DAMD database.

DAK-E IT develops the feedback quality reports which are generated individually for each general practice on the basis of the accumulated data in the DAMD database. The reports are presented online and the GP accesses his/her reports via his/her professional digital signature. This admittance procedure ensures fully confidentiality as the GP's reports only will be accessible to him/her.

The reports on chronic diseases include a benchmark section which enables the GP to compare his own quality with that of other GPs on a local and a national scale.

DAK-E IT is able to design pop-up screens to provide almost any thinkable patient data which could be of interest to GPs and researchers in order to improve the quality work in general practice.

DAK-E finds it very important that GPs participate voluntarily and that they receive feedback in order to acquire knowledge about how their practice operates. This knowledge can help general practice to improve quality - possibly in connection with additional training.



See the “Demos” of anonymous reports.

5. Project realization: The realization of the Data Capture program was a joint effort between several organisations influential in general practices in Denmark: The Association and college of GPs the Universities, the Regions and the Central Quality Unit of GPs.

In 2005 it was made available to GPs throughout the country and courses were run in the clinics that joined the program (se WP1).

With the resent agreement that regulates the GPs working conditions, joining the Data Capture system is obligatory for all GPs before 2012.

6. Discussion: This project presents a unique possibility to gain insight in the quality in the work of GPs in DK from the level of the single GP to the sector as a whole. GPs are offered ordered weekly reports on the quality of their care on diabetes as well as a range of other disease entities.

Indicator sets for use in the Data Capture system are being continuously developed and updates simultaneously with the release of clinical guidelines, and the data for individual GPs and clinics are used in a wide range of CME activities.

Recently, chronic care patients have got access to data on their chronic care e.g. diabetes care, so they can see the development in their personal treatment goals.

At this time more than 1.000 Danish GP clinics have joined the system, and by 2012 it will be all 2.200 Danish GP clinics.