University of Pécs Faculty of Health Sciences

Doctoral School of Health Sciences

Head of Doctoral School: Prof. Dr. József Bódis, DSc

Cardio-cerebrovascular prevention in general practice/family medicine – assessment and development of organizational and reimbursement models

Dr. Renáta Emese Papp

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Head of Doctoral Program: Dr. Zsófia Verzár, PhD habil, Associate Professor, Head of Department, Department of Emergency Medicine, Medical Faculty of University of Pécs

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Supervisor: Dr. Sándor Balogh PhD habil, Associate Professor, Chair of the Institute of Family Medicine, Medical Faculty of University of Pécs

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1. INTRODUCTION

The increase in the number of chronic diseases is a global problem; while in 2000 the non-infectious chronic diseases represented 46% of the total, according to WHO forecast by 2020 this ratio will increase to 60% (1).

In Hungary the cardiovascular diseases are the leading cause of death, meaning 62,979 deceases in 2012 (2). Although the life expectancy at birth in Hungary has shown a continuous increase starting from 1990s, it is still lower than the EU-27 level by 6.05 years (for men) and by 4.72 years (for women), respectively (3,4). The decrease in the total number of deaths is mainly due to the decrease of deaths by cardiovascular diseases (5).

Being one of the main challenges of the health care systems of our century, it is necessary to find an efficient professional, organizational and financing methodology for the care of chronic diseases. It has been shown, that the primary health care system has a major role in implementing the known preventive strategies at population level (6,7).

Regarding the implementation of the prevention from an organizational-strategic point of view, based on the target groups, the following three categories can be identified (8):

1. *Universal prevention* – the preventive program is targeting the entire population independent of the individual risk status. This interventional level is aimed at the entire population, mainly by the use of media channels, starting from childhood, encouraging the development of a healthy lifestyle and giving up health damaging customs.
2. *Selective prevention* – the preventive activities means the identification of groups at risk and the intervention is aimed at these risk groups.
3. *Targeted prevention* – is aimed at individuals showing early signs of disease as part of the health care activities.

The implementation of the universal preventive programs is the task of the entire society, the state with its institution system and not strictly speaking of the health care system itself. The selective and targeted prevention are mainly the tasks of the health care system,

although for maximizing the effect by increasing the sensitivity of the population with the use of communication and of other tools is required.

WHO reports summarizes the knowledge in this area (9) and states that the prevention and the management of chronic diseases shall be organized mainly at the level of primary health care.

2. OBJECTIVES

It is a fact that the number of deaths by cardio-cerebrovascular diseases has decreased in Hungary (5). How was this achievable? Could this decrease be more substantial? Can this be planned in the future? What kind of tool system can help maximizing the achievable results regarding the prevention of diseases, in particular of cardio-cerebrovascular diseases?

The specific objective of this thesis is to study the outcomes of the selective and targeted preventive programs realized at the level of the primary health care system, to reveal the efficacy, the strengths and weaknesses, the opportunities for extension and their limitations. A further objective is to formulate suggestions summarizing the analysis and evaluation of the results.

3. METHODS

In order to achieve the proposed objectives, the analysis of such foreign models and the performance and/or analysis of such Hungarian programs was performed, which were aimed at improving prevention of cardio-cerebrovascular diseases in the primary health care system.

Such programs were chosen/performed which

- relate to selective and targeted cardio-cerebrovascular prevention;
- were/are realized through the work of professionals working in the primary health care system;
- have a wide geographical coverage or based on their organizational structure can be extended;
- the analysis of the interim or final results has been performed;
- use/used different in methodology from one to another.

3.1. Outlook on the European models

3.1.1. Quality Outcomes Framework (QOF) – United Kingdom

The performance assessment of the primary health care system (QOF) managed by the British National Health System (NHS) is the most extended regarding its clinical and public health territory and with the highest budget in Europe. This is the reason why its analysis is the most detailed.

The scope of the QOF score system is to provide a general, yearly evaluation of the performance of the primary health care practice. The participation in the evaluation is voluntary and is the basis of incentives proportional with the achieved score, corrected with the size of the population and the number of those diagnosed with the disease in the given clinical area.

The evaluated areas have been selected carefully, chronic diseases (e.g. hypertension, asthma, diabetes) management is measured in those areas where the general practitioners/family physicians (GP/FP) are taking part actively and effectively.

The strengths of the system are:
- participation on a voluntary basis

- evidence-based indicators

- predefined updating criteria and responsibilities

- the correction is in the score-Pound value and not in the scoring, so the scores of the practices can be compared with each other, allowing for a good point of reference

- fixed score-Pound value over the entire evaluation year

- the financing based on the quality indicators represents a significant amount of the entire income of the practice

- the information technology support is ensured (allowing also for paper-based documentation)

- the source of data is the information documented by the GP/FP practice

- such clinical areas have been selected as can be influenced by the activity of the GP/FP practice

- the evaluation of the therapy is based on the indication of medicines by the GP/FP not the one released by the pharmacies

- the GP/FP has the possibility to exclude a patient from the evaluation in case of patient non-compliance or other predefined exclusion criteria are met.

According to the objective of this thesis, the incentives of the QOF program specifically applied in the prevention of cardio-cerebrovascular diseases were studied. From the total of 471 points which could be accumulated over all clinical areas, 168 points (35.6%) characterize the management of cardio-cerebrovascular diseases, including hypertension, diabetes and the care for clinically manifest diseases (stroke/TIA, peripherial arteriopathy). From the total of 124 points achievable in the public health area, 105 (84.6%) refer to the prevention of cardio-cerebrovascular diseases (evaluation of cardiovascular risk, screening for hypertension and obesity, smoking cessation), although obesity and smoking can be considered risk factors for other diseases, too.

3.1.2. Heartwatch Program – Ireland

Heartwatch Program was launched in 2003 under the coordination of the Irish College of General Practitioners with the aim to improve quality of the management of cardiovascular disease by GP/FP. Patients included were checked every 3 months according to preset criteria; GP/FP were rewarded by a fix amount of reimbursement based on the report of the visit.

Due to the fact that approximately 20% of Irish GP/FP practices have been included into the program, a control group is available for the evaluation of its results. The evaluation of the two year results (2003-2005) showed that patients included into the Heartwatch Program received in higher ratio preventive medicines, which in case of statins was three-fold higher (10). The additional costs incurred for the reimbursement of medicines amounted to the equivalent in Euros of 196 million HUFs, while the budget of the entire two-year program reached the equivalent in Euros of 1.25 billion HUFs. The comparative epidemiological analysis of the two patient groups showed that in the frame of the Heartwatch Program 81 deaths were prevented or delayed and the program yielded a saving of 522 life-years.

In summary, the program showed numerous favorable results:
- significantly decreased the levels of the three main risk factors: prevalence of smoking, the levels of cholesterol and of blood pressure,
- the number of those receiving preventive medication increased,

- the screening and treatment of diabetes improved,
- the quality of care provided by GP/FP improved, in highly cost-effective manner.

The Heartwatch Program is a disease management program which aimed to improve the health status of patients with chronic diseases, in the present case specifically of those with cardiovascular diseases in order to reduce complications, and the requirement for emergency and hospital care and to minimizing the associated costs (11).

The follow-up of the Heartwatch results showed that participation into the program significantly decreased the cardiovascular risk, the chance for cardiovascular events and the total mortality in comparison to the patients not included into the program. The Heartwatch Program created a frame for the reduction of the incidence of cardiovascular events, for the improvement of cardiovascular risk status, supporting the possibility for extension of the program for the entire country (12).

3.1.3. European Practice Assessment (EPA)- Cardio Projekt

Inside European Union although organizing health services is a country specific function and competence, due to the free movement of work force and patients, the importance of the differences encountered in the medical practices is gaining weight. The scope of the expert group was to develop a widely accepted tool system which is adequate to evaluate the quality of the cardiovascular risk management, in order to identify the best preventive practices and to allow the implementation of its elements in other health systems. The EPA-Cardio tool system contains indicators for important clinical areas like hypertension and hypercholesterolemia. The indicator system contains quantitative measurements, for which the source data is the documentation in the medical records, while the evaluation of qualitative factors is made based on patients and practice-team questionnaires. The implementation of the indicator system was evaluated in a pilot study with the participation of GP practices from six countries. The evaluation of the results showed that in each country different factors bring positive results and that each country could learn from the experience of the others. The provision of lifestyle advice is an important challenge, first the evaluation and documentation of the lifestyle risk factors is required. The coordinating board of the program summarized that programs aiming the development of preventive activities in the

field of primary health care system shall focus on the assessment of cardiovascular risk and provision of preventative medication.

3.2. Analysis and evaluation of Hungarian primary care cardio-cerebrovascular preventive programs

3.2.1. Research on the perspective of GP/FP on the implementation of guidelines for cardiovascular prevention

The objective of the research was to establish how well are known the recommendations of guidelines for cardiovascular prevention and which are the factors influencing their implementation in every day practice.

Method

The general practitioners replied via a phone interview to questions related to cardiovascular prevention. The answers were collected by interviewers from randomly selected general practitioners six from each county and ten from Budapest. During the evaluation process the respondents were not identifiable; the summing up of the reply variants to each of the questions and the calculation of their ratios was performed with MsExcel software.

Results

A total of 124 GP/FP interviews were assessed. The evaluation showed that the general practitioners are acquiring their information on the updated scientific evidence and recommendations from professional publications (31%) and postgraduate education courses (31%). The use of Internet (19%) and the medical representatives (18%) were also nominated as sources of information.

The local adaptation of international recommendations was considered important and providing additional information by 68% of the respondents, 14% found the local adaptation unimportant, while 18% could not evaluate this question. Ease of overview is important, in case of 66% of the respondents influencing substantially the practical usage.

More than two thirds (67%) of GP/FP considered important to have information technology (IT) tools supporting the implementation of the recommendations. GP/FP follow the target values described in the risk stratification presented in the cardiovascular prevention guidelines (82%) rather than those of the laboratory findings, allowing for a more efficient

follow-up of a patient tailored therapy. For GP/FP the expected update frequency of the recommendations was 1 year in 39% and 2 years in 41% of cases.

3.2.2. Study on the documentation of the cardio-cerebrovascular preventive activities in GP/FP practice

The aim of the study was to evaluate to what extent are documented in the primary health care system the cardiovascular preventive tasks defined in the legislation: basic documentation sheet and 51/199. NM decree (further screening decree) (13,14).

Method

The methodology of practice-analysis was applied during the study (14). Over 5 weeks, for one day weekly, with one working day shifted every fifth patient's existing documentation on cardiovascular prevention was studied, with the aid of a patient datasheet, so that data from 10 patients were collected per day.

In all cases the source data for each patient's datasheet were the data already recorded and not those collected during the actual visit of the patient. The patient's visit was only a sample collection and randomization tool. Seventy-two GP/FP practices were included, with 50 patient datasheets filled in for each practice. The work of the general practitioners was helped by 14 GP-coordinators working in the nearby geographical area. Data were analyzed with the aim of getting information about the basic health status report to be taken at the age of 21 years old and to reveal the frequency of control visits based on age groups defined in the screening decree.

Results

A total of 71 practices participated in the study and with the developed datasheet the evaluation of 3,521 patient-records was performed.

During the study period a total of 114,579 patients were registered into the practices' lists, out of which information were collected from 3% during the 5-week period of the study. The ratio of patients over 65 years of age was the highest, 4.9% of the total population registered. 72.5% of the studied patients take medication regularly and within the 12 months preceding the study they visited their GP/FP on average 10.5 times.

The basic health status to be documented at 21 years of age in accordance with the screening decree was recorded in 24 cases out of 29 reaching the age of 21 in the year of the

study. In the 20-29 year age group the basic status has been recorded in almost 100% of the total of 269 cases.

The blood pressure values are recorded most frequently (in 96%), the body mass index in 76% of cases and the abdominal circumference in 49% of cases.

In accordance with the basic documentation sheet, the 2-hour postprandial blood glucose value shall be recorded, while in accordance with the screening decree in case of risk of type 2 diabetes oral glucose tolerance test (OGGT) shall be performed or in case this is not available the fasting- and the 2-hour postprandial blood glucose tests shall be performed. The fasting blood glucose level is registered in 87% of cases, while OGGT results are available in 22% of cases.

The ratio of documentation of triglyceride and cholesterol levels is 84-84%. Referring the renal functions, serum creatinine was recorded in 77%, proteinuria in 75%, hematuria in 65% and creatinine clearance in 29% of cases.

The cardiovascular risk level to be assessed according to the screening decree, was found in 21% of the 20-29 years age group and in 46-57% of cases in the 40-70 years age group of patients.

3.2.3. GP/FP Prevention Grant 2005 – program of the National Insurance Fund (OEP)

The aim of the grant was developing and supporting the primary health care system services regarding customized health promotion and disease prevention activities.

Method

The guidelines of the National Institute of Primary Health Care (OALI) were applicable for the screening and evaluation of the cardiovascular risk factors (16). In order to help the practical use of the guideline an information technology tool was developed, called CardioNET, which was recording the individual risk factors and helping calculate the patient-specific risk level and determine the applicable therapeutic targets. The software allowed a printout for the patient about their risk status along with advice connected to it. The use of CardioNET was on voluntary basis, and the tool was working as an independent module or in connection with the primary health care documentation software. The export of patient data from the GP/FP practices was performed in accordance with the content and format required by the grant system. The anonimization of the data was realized during the data forwarding

process, the risk data linked to the patient personal data being visible only in the primary health care practice but not in the centralized database.

In the frame of the grant the preventative activities were performed in the practices over a period of eight months, and each GP/FP was under obligation to present a summarizing report of the activities. If the practice used the aid of CardioNET to perform and record the preventive measures, the evaluation of the reports was made automatically by the central module of CardioNET. Apart of the professional and technological support, a group of peer-reviewers helped the coordination and monitoring of the process at the level of practices, together with the central coordination of OALI.

The screening activities to be performed in the frame of the grant had to be covering at least 25% of all insured registered in the practice. In case of achievement of screening targets and successful submission and acceptance of the closing report, practices were allocated a fixed amount of financial compensation.

Results

Out of a total of 380 practices submitting grant application, 7 were refused, 28 did not sign the contract, and of the remaining 345 practices 312 have performed the undertaken activities before the deadline. The CardioNET supporting services were used by 107 practices. This way 31% of the closing reports were ready for processing by the central module of CardioNET, representing the data on cardiovascular risk status of 26,326 persons.

The practices submitting CardioNET closing reports had a total of 92,614 registered patients, out of which 28.5% were screened, fulfilling this way the grant requirement of including at least 25% of their patients.

For the 20-29 years of age groups the ratio of patients included into the screening exceeded 10%.

Dependent upon the recorded risk parameters in 80% of the studied patients the software could run the estimation algorithm and determine the risk level; the risk status of 8,525 men and 12,447 women patients were determined in accordance with the guideline. The risk level was found high in 63.5%, moderate in 5.9% and low in 37.9% of the studied patients. In the 20 to 40 years age group the ratio of high risk patients reached 6.7%, and this ratio increased with age.

Among the risk parameters resulting in high cardiovascular risk - smoking, increased value of systolic blood pressure, increased level of cholesterol, pathological value of abdominal

circumference - in case of women the increased abdominal circumference and cholesterol levels exceeding 5mmol/l have played a significant role. In case of men, besides these two parameters, smoking is the additional parameter concurring in increased ratio to a high cardiovascular risk.

3.2.4. Healthy Vásárhely Program (EVP) – cardiovascular risk management project

The specific scope of the program was screening of the most important risk factors of cardiovascular diseases, the individual assessment of cardiovascular risk and then the relevant adequate risk management. The tools for reaching this goal were lifestyle changes, early screening and treatment of patients, the targeted and personalized handling of the most important risk factors, and application of preventive medication as recommended by the international and national guidelines.

Method

In each practice, the GP/FP recruited at least 100 persons from those of their patients, which had one or more cardiovascular risk factors with pathological value. The patients were subjected to targeted cardiovascular management in the GP/FP practice in order to reach the target value for the given parameter. Such target values were determined for the project in accordance with the OALI guidelines (16) for each risk group. The CardioNET system aided the determination of the personalized cardiovascular risk level and target value. The central module of CardioNET was used for the evaluation. It was established what percentage of the patients can be treated by individual GP/FP practices to the target levels set forth in the guideline.

In order to be entitled for compensation the GP/FP was obliged to reach the target value in at least 60% of cases in patients with high blood pressure. In case of lipid metabolism disorder or metabolic syndrome the aim was to reach in 50% of patients the LDL-cholesterol target values in accordance with the patient's own risk assessment. In case of diabetes mellitus 33% of patients had to reach the target value for fasting glucose levels ≤6 mmol/l.

Results

At the start of the program 10 practices were involved, while by the end of the project 8 practices provided data on patients' status. A total of 1,211 patients took part in this EVP project.

In the management of high blood pressure the practices reached the risk adjusted target value on average in 76% of the cases, while the scope was 60%; for LDL-cholesterol the ratio reached was 47%, which remained below the 50% target goal; for diabetes the target value for fasting glucose level was reached in 33% of cases, while the targeted ratio was 37%. For each practice the overall fulfillment of the target values was weighted based on the total number of patients in the given risk group.

3.2.5. The cardiovascular preventive activities of GP/FP measured by the performance indicators of the National Insurance Fund (OEP)

In order to motivate the GP/FP practices for performance of high quality and effective activities, in 2010 a nationwide unified indicator system has been developed. From the indicators applicable for practices caring for adult and mixed population there are seven indicators relating to the management of patients at cardiovascular risk or diagnosed cardiovascular diseases: treatment of hypertension, determination of creatinine levels for patients with hypertension, lipid-control for those with hypertension/diabetes mellitus, beta-blocker therapy after major cardiovascular event, and to the management of diabetes by the HbA1c and ophthalmologic control. The aim of the present evaluation is to study whether the measurement of quality indicators and the correlated reimbursement was having an influence towards the improvement of the management parameters measured by these indicators.

Method

For the years 2011-2014 the number of patients in the respective register (denominator) and the number of patients in the intervention group (numerator) referring to the indicators selected for the cardiovascular domain were studied based on the records stored by OEP information system. Due to the timing of data query the indicators were covering a 12 month period starting from 1st July of a given year and ending 30th June of the next year. Because of the lack of seasonal influence in case of cardiovascular diseases and from the study of monthly data for the preceding 12 months in connection with the calculation technique, no influence is expected on the evaluation of the results. Data query was exported in MsExcel, which was used for the statistical analysis as well.

Results

The indicator on hypertonia screening in the younger (40-54 years) and older (55-69 years) age groups shows the increase of the target group, with slightly decreasing (1%) indicator values in younger and stable values in the older group. The number of those receiving antihypertensive medication showed decrease (3.7%) in the younger and increase (1.1%) in the older age group.

The ratio of determination of serum creatinine levels in hypertensive patients increased by 1% in each of the 3 years reaching 66%. There was no differentiation in age group when considering denominator of this indicator.

The number of those receiving antihypertensive medication increased with 1% by the end of the 3rd year while the number of those receiving antidiabetic or insulin treatment increased by 5% during the same time period.

The ratio of determination of blood lipid level in patients with hypertension and diabetes increased by 1% by the 3rd year and reached the 60% ratio. The ratio of patients receiving beta-blocker therapy following major cardiovascular event or cardiac intervention increased from 47% to 51%, while the affected target group decreased by 5%.

By the end of the study period the ratio of diabetes patients having HbA1c determination raised with 3%, reaching 74%. The ratio of ophthalmologic control performed in the frame of diabetes management decreased yearly by 2% and 1% respectively, while the target group expanded, showing at the end of the study 39%.

In case of achieving the target value of a given indicator, the GP/FP practice received 1 point, and the point-Forint value increased by the 3rd year with 42%, reaching the amount of 13,922 HUFs. In connection with the studied indicators the practices could reach a maximum monthly income of 97,454 HUFs, which represents 8.66% of the monthly average financing amounting to 1,125,285 HUFs for the year 2013. At country level the total amount paid to GP/FPs based on cardiovascular indicators was 116.69 million HUFs. The highest weight in the reimbursement, 19.3%, was allocated to the indicator on determination of HbA1c in patients with diabetes followed by that on serum creatinine level determination with 16.7%.

4. MAIN CONCLUSIONS

1. The Hungarian national primary health care can be considered „strong" based on the studied Macinko criteria.

2. The cardio-cerebrovascular preventative activities of GP/FP have their place and emphasized role in the decrease of mortality.

3. The adaptation of the guidelines on cardio-cerebrovascular prevention for primary health circumstances, the training and support by information technology tools is of necessity for practical implementation.

4. Already in the young (20-29 years of age) age group the cardiovascular screening and intervention (if necessary) is justified.

5. The fixed, activity connected reimbursement is motivating toward the inclusion of patients in a given preventive activity.

6. The information technology background (data recording, risk assessment, reporting, feedback/benchmarking) is of vital importance.

7. It is necessary to include such clinical/public health domains in the incentive system, upon which the primary health care has significant influence.

8. The source data used in the assessment of performance shall be the ones documented in the GP/FP practice.

9. The incentivizing effect decreases after a certain time/increase of the score threshold and the improvement of results is not persistent.

10. The opportunity for benchmark made available for GP/FP practices it is an important tool for their self-evaluation.

11. The decentralized and geographically embedded background organizational support (GP/FP, nurse, coordinator) facilitates the execution of the programs.

5. RECOMMENDATIONS

Based on the analysis and evaluation of international and national studies the following recommendations can be made in order to increase the effectiveness of national regulation and practice in primary health care.

Development of the primary health care system

Based on the present work it can be concluded that the Hungarian GP/FP system has strong foundations. The deficiencies of the referral system (for ex. specialist care available without GP/FP referral, entitlement for specialist control visits without GP/FP referral) shall be solved. The operative GP/FP competence list shall serve as a basis for the development of the complexity of primary health care, to be implemented in practice taking in consideration the knowledge level and financial feasibility.

Professional domain

The prevention of **cardio-cerebrovascular diseases** is one of the major tasks of GP/FPs, the impact of their activity in the **screening and management** could lead to significant results in this domain. Accordingly, the presence and weight of this domain in the incentive systems shall be maintained. The selective and targeted prevention strategy shall be followed, meaning that the persons at risk shall be identified and shall receive dedicated treatment and follow-up.

Professional content

The guidelines of the screening decree (13) are recommended to be maintained regarding the **professional content** of the screening, risk stratification and risk-correlated **assessment frequency,** instead of the principles of the basic documentation sheet. The data content of the screening decree shall be supplemented with an amendment about the screening for diabetes (e.g. Findrisc method) (17), aiding the screening based on risk groups.

Data recording and information technology (IT) support

It is necessary to develop the **frequency** and **data content** to be **recorded** and **reported** during the preventative activities, along with its **informatics format**. Inclusion of aids into the documentation systems supports GP/FP data recording: formula (e.g. BMI, creatinine clearance), algorithms (e.g. cardiovacular risk evaluation, diagnosis of metabolic syndrome, risk assessment in case of renal diseases), reminders supporting the follow-up process, annexes with lifestyle recommendation. A central information module is necessary for the processing of data coming from GP/FP practices and for feedback and benchmark purposes.

The IT support ensures:

- recording of required and sufficient data sets for cardio-cerebrovascular preventative activities, support for risk assessment,
- follow-up of the variations in time of the risk factors, and

- in the frame of central data processing, the support of data evaluation, feedback towards the practices and benchmark opportunity.

Lifestyle advice

The perceptions of patients and GP/FP diverge regarding lifestyle advices. The patients require personalized lifestyle advice taking into account local possibilities. It is necessary to develop local protocols regarding advice on healthy lifestyle (smoking cessation, increased physical activity) for their effective accomplishment at local level.

Patient motivation

It is necessary to support individuals in visiting their GP/FP in order to record the risk status at 21 years of age and to develop a health management plan. The possibilities arisen by the involvement of the patient shall be taking advantage of providing personalized written findings, health diary books as examples. This way the risk status is recorded, can be followed by the patient, and increases the GP/FP practice's accountability towards health insurance fund.

Incentive system

It is required to continue putting forward the motivating instead of the punishing system. The existence of primary health care documentation supposes the actual performance of the recorded activity. In case additional control seems necessary than further proofs shall be implemented (for e.g. provision of written findings to the patients, regular group meetings of the local GP/FP community – such as experienced in the Hungarian managed care program, Austrian and Croatian examples could be also studied). In the incentive system the targets shall be manageable in the allocated timeframe. The importance of allocating the right amount of time is supported by the EVP project (see section 3.2.4.): the high blood pressure values are reacting to therapy in a shorter amount of time, and the acceptance of the treatment by the patients and the adherence to treatment are also higher. At the same time in case of medication for lipid disorders or diabetes the changes in the target values are hardly detectable in a timeframe of a few months.

Besides the feasibility of the expected performance, tools shall be available supporting the objectives of the program: e.g. recommendations, preparation of the IT systems. The consistency of the target system shall support the measurement of the targets and the comparability over time of one practice and inter-practices comparisons as well. Strict follow-up of the achievement of the set objectives and adjustments are required to avoid

stagnation in the results. These shall be at the basis of defining the set of performance indicator in primary health care. The financial correction shall take place after the evaluation of the indicators, supporting the comparability and follow-up of the results. The amount of compensation shall have an incentive value. Although besides indicator based reimbursement scheme, more complex incentives could be considered, such as developing organizational behavior (e.g. incentives forwarding establishment of practice-teams, creating conditions for employment of further qualified staff).

Organizational background

Involving the traditionally available peer-review system could represent an advantage at the start of all incentive programs, because it creates the possibility of local coordination for geographically scattered practices. The local consultations can be performed in GP/FP groups, which are an important group-forming tool, and to which incentives can be allocated (e.g. credit point scores). The content of the professional control shall be correlated with the incentive system. The methodological background of the work of the peer-reviews has been set in the book of OALI (18), the peer work could be supported by the proposed standardization of data record and IT system.

The recommended system supports the achievement of public health goals, can be introduced within a short deadline, would be providing cross-section and prospective data, would be monitoring changes in the public health situation, all of which are the basis of further planning and execution. In order to avoid the inerty always encountered when attempting the introduction of some changes, the program shall be on a voluntary basis. It is recommended to create between the GP/FP practices and the coordinating boards a development-supporting work relationship.

6. SUMMARY

The national prevalence of cardio-cerebrovascular diseases and their leading role in mortality is well known. The deeper understanding of the conditions leading to a decrease in cardio-cerebrovascular mortality observed over the last years and on this basis the introduction of a tool system could ensure a reliable improvement. The risk screening and management shall be organized mainly at primary health care level, while the planning and execution of universal, risk status independent prevention of the entire population is a society-level task, beyond the frame of the health care system. The specific aim of this thesis was to study the effectiveness, strengths, weaknesses, opportunities of extension and the limitations of selective and targeted cardio-cerebrovascular prevention projects undertaken at primary health care level, with formulating suggestion for their complex development. International and national programs performed in the primary health care system in connection with these topics have been evaluated. Based on this thesis it can be concluded that the Hungarian GP/FP system has strong foundations, however some suggestions can be formulated aiming its development. Harmonization of documentation requirements and the development of the connected IT support and reporting system is necessary, along with correcting the deficiencies of the incentive system in the primary health care. Involvement of the population and introduction of techniques helping GP/FP reaching out to the target population is desirable for the identification of those at risk and for the improvement of their personal involvement. It is advisable to develop the organizational level of the geographically scattered, individually functioning practices in order to speed up the implementation of certain provisions, while also allowing for the possibility of local creative solutions.

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