ATTITUDES OF SLOVENE GENERAL PRACTICE TRAINERS TO THE IMPLEMENTATION OF PREVENTIVE ACTIVITIES

ODNOS MENTORJEV SPLOŠNE MEDICINE DO IZVAJANJA PREVENTIVNIH DEJAVNOSTI

Mateja Bulc[1,2]

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Abstract

Aim: *To determine the knowledge of and the attitudes of Slovene general practitioners (GPs) to evidence-based health promotion and disease prevention, to identify perceived barriers to the implementation of recommendations, and to assess how GPs' own health behaviors affect their work.*
Methods: *This study was a part of the multinational EUROPREV (European Network for Prevention and Health Promotion in Family Medicine and General Practice) survey. In 2000/2001 a postal survey was conducted in a sample of GPs from national colleges of each EUROPREV member country. In summer 2000, 100 Slovene general practice/family medicine (GP/FM) tutors were sent EUROPREV questionnaires assessing their attitudes towards preventive services in general practice and towards their own lifestyles.*
Results: *The response rate was 55%. Slovene GPs are well aware of the need to provide preventive and health promotion services, but in practice, they are less likely to do so. A total of 62% of respondents found it difficult to implement disease prevention and health promotion programmes. Heavy workload and lack of time (93%), as well as lack of incentive (35%) were the two most important barriers reported*
Conclusions: *A significant discrepancy between GPs' knowledge and practice was found as concerns the use of evidence-based recommendations for health promotion and disease prevention in Slovene primary care.*

Key words: attitudes, prevention, health promotion, general practice, Slovenia

Izvirni znanstveni članek
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Izvleček

Cilji: *Ugotoviti, kakšno je poznavanje in odnos slovenskih splošnih zdravnikov do preventivnih dejavnosti in dejavnosti za krepitev zdravja, podprtih z dokazi; opredeliti ovire, ki jih doživljajo pri izvajanju priporočenih dejavnosti in ugotoviti, kako njihove lastne zdravstvene navade vplivajo na njihovo delo.*
Metode: *Raziskava je del mednarodnega projekta EUROPREV (Evropska mreža za preprečevanje bolezni in krepitev zdravja v družinski medicini in splošni praksi). V letih 2000/2001 je potekala anketa, ki je zajela vzorec družinskih zdravnikov nacionalnih univerz vseh držav članic mreže EUROPREV. Poleti leta 2000 je sto slovenskih tutorjev splošne/družinske medicine prejelo vprašalnik EUROPREV o odnosu do preventivnih dejavnosti v splošni praksi in do lastnih zdravstvenih navad.*
Rezultati: *Odgovorilo je 55 % vprašanih. Slovenski splošni zdravniki se dobro zavedajo nujnosti preprečevanja bolezni in krepitve zdravja, vendar je ta slika v praksi drugačna. Dvainšestdeset odstotkov anketiranih je menilo, da je delo na področju preprečevanja bolezni in krepitve zdravja zahtevno. Največkrat navedene ovire v anketi so bile delovna obremenitev in pomanjkanje časa (93%) ter pomanjkanje pobud (35%).*

[1] Health Centre Ljubljana, Ljubljana-Šiška Department, Derčeva 5, 1000 Ljubljana
[2] University of Ljubljana, Faculty of Medicine, Department of Family Medicine, Poljanski nasip 58, 1000 Ljubljana
Correspondence to: e-mail: mateja.bulc@email.si

Zaključki: *Pri uresničevanju z dokazi podprtih priporočil za krepitev zdravja in preprečevanje bolezni v osnovnem zdravstvu se je pokazala velika neskladnost med znanjem splošnih zdravnikov in njihovim praktičnim delom.*

Ključne besede: odnos, preventiva, promocija zdravja, splošna praksa, Slovenija

Introduction

Cardiovascular diseases are the major cause of early death in developed countries; they are an important cause of morbidity and invalidity, and of increased health care costs (1). Guidelines and recommendations on prevention, identification and control of arterial hypertension focus on lifestyle risk factors and patients' health behaviour (2 - 3). Elimination of lifestyle-related risk factors is extremely important not only in patients but also in "healthy" individuals at high cardiovascular risk (4). As it is not possible to influence biological risk factors (gender, age and family history), primary health care physicians are supposed to focus on lifestyle risk factors, including unhealthy diet, physical inactivity, smoking, risky alcohol consumption and overweight (5). These are the most important issues that should be addressed through public health policy and medical interventions (1).

Cardiovascular diseases are the major cause of early death in developed countries; they are an important cause of morbidity and invalidity, and of increased health care costs (1). Guidelines and recommendations on prevention, identification and control of arterial hypertension focus on lifestyle risk factors and patients' health behaviour (2 – 3). Elimination of lifestyle-related risk factors is extremely important not only in patients but also in "healthy" individuals at high cardiovascular risk (4). As it is not possible to influence biological risk factors (gender, age and family history), primary health care physicians are supposed to focus on lifestyle risk factors, including unhealthy diet, physical inactivity, smoking, risky alcohol consumption and overweight (5). These are the most important issues that should be addressed through public health policy and medical interventions (1).

Nowadays general practitioners (GPs) and family physicians provide services to autonomous individuals across the fields of prevention, diagnosis, cure, care and palliation, using and integrating the sciences of biomedicine, medical psychology and medical sociology. Two-thirds of the population in most European countries visit their GP at least once a year, and 90% at least once in five years. GPs are therefore in an excellent position to administer age- and sex-specific preventive and health promotion packages. These services are provided either in an opportunistic manner, i.e. when patients attend for any reason, or as planned services, i.e. as a part of scheduled, evidence-based preventive programmes (4).

However, there are differences in the structure and organization of practice in European countries, which vary largely in the degree of involvement of general practitioners in preventive activities. In Slovenia the Countrywide Integrated Non-communicative Disease Intervention (CINDI) programme has been adopted as one of the strategies targeted at lifestyle modification (5-9). It was developed by the World Health Organization (WHO) with the aim of preventing chronic diseases. It focuses on risk factors that contribute to the development of chronic non-communicable diseases. By assessing risk factors in the targeted population using standardized methodology the global cardiovascular risk is being modified. Each member country has to determine the prevalence of risk factors in the population of a given geographical area, assess the cardiovascular risk and intervene according to the risk (4). Public health authorities participated in the intervention by launching national information campaigns, by supporting healthy lifestyle modifications, using political interventions, such as strict legislation against smoking in public places and smoking advertising, along with campaign guidance to achieve and maintain smoking cessation in the population (4).

Significant changes have occurred in Slovenia in the field of prevention and health promotion over the past ten years. A group of enthusiastic general practitioners in the Ljubljana Health Centre joined the WHO-CINDI programme 15 years ago (5-7). Three survey studies on a random sample of adult Ljubljana inhabitants were performed to determine the prevalence of risk factors and assess the global cardiovascular risk. As the global risk levels were high, interventions had to be introduced following the WHO-CINDI directive (10). Health education programmes for physicians and nurses were designed

and implemented. Interventions against unhealthy behavior patterns were initiated in 1992; they were targeted both at the entire country's population (nearly 2 million), and at individual high-risk patients (8).

In recent years health promotion has emerged as an increasingly important segment of primary health care in Slovenia (6 - 9). This trend is part of a movement towards the integration of public health responsibilities into general practice. Primary health care teams had to assume new strategic responsibilities. Responsibility for maintaining and promoting the health of patients on the practice list was entrusted to GPs by the 2001 GPs' contract (9). It incorporates the following elements:

- population monitoring through health surveillance;
- regular health checks for adults; and
- setting up of health promotion centres.

In spite of all these facts, the provision of disease prevention and health promotion services posed considerable difficulties to the practicing physicians in Slovenia. The results of the study clearly confirm considerable disparity between the GP tutors' knowledge and practice of preventive services.

The objective of this cross-sectional epidemiological study was to explore the knowledge of and attitudes of Slovene GPs towards the implementation of evidence-based health promotion and disease prevention recommendations in primary care, to describe GPs' perceived barriers to implementing these recommendations, and to assess the participants' self-reported health behavior.

Methods

Participants

The data were collected by a postal survey as part of the 2000/2001 EUROPREV (European Network for Prevention and Health Promotion in Family Medicine and General Practice) survey (11). The required sample size per country was calculated by EUROPREV. The survey instrument and an addressed stamped return envelope were mailed to 100 Slovene GPs, tutors in general practice/family medicine from June to August 2000.

GPs for the survey were recruited by the Department of Family Medicine of the Faculty of Medicine, University of Ljubljana. To become GP/FM tutors in Slovenia, physicians are required to be specialists in GP/FM and must have participated at least once in two years in the annual workshop organized by the Department of Family Medicine and European Academy of Teachers in GP/FM (EURACT).

Method

The EUROPREV network developed and pre-tested a questionnaire, which was piloted with ten GPs, using a pre-paid addressed envelope. For the Slovene survey, the original EUROPREV questionnaire was translated from English to Slovene, and adapted for use in Slovenia. It consisted of four sections. The first section had questions designed to collect demographic and professional data on participants (11).

The second part of the questionnaire contained two clinical scenarios: one presenting a 52-year-old male, and another a 57-year-old female, who visited their GP with a trivial health problem and had had no previous check-ups or tests. GPs were asked to mark:

a) preventive activities that should be performed, and
b) preventive activities that they actually perform in their clinical practice.

The third section of the questionnaire asked GPs' about their perception of the delivery of preventive and health promotion services, and about barriers to the implementation of these programmes.

The fourth section had questions on the participants' health behaviours.

Statistical analysis

All the returned questionnaires were sent back to the co-coordinating and data management centre of the EUROPREV headquarters in Barcelona, Spain, to assure centralised data entry and analysis. The mean and standard deviations for continuous variables and percentages for categorical variables were computed. All analyses wered one using the STATA programme (version 5.0).

Results

The response rate in Slovenia survey was 55.0%. Sex distribution of respondents (Table 1) did not differ considerably from that in the total population in Slovenia (12). The mean age of participating physicians was 46 to 59 years (SD ± 6.43). Their professional characteristics are shown in Table 2.

Responses to both scenarios disclosed a disparity between GPs' knowledge of and practice towards risk factors, with the exception of blood pressure control (Table 3), as well as a difference in their attitudes towards male and female patients. Nearly all participants checked blood pressure in the male scenario, but only two-thirds did so in the female case vignette. The same proportion of respondents checked serum cholesterol and blood glucose in both case

Table 1. *Gender characteristics of the Slovene population and tutors-respondents (N=55).*
Tabela 1. *Prebivalci Slovenije in anketirani tutorji po spolu (N=55).*

Population of Slovenia / Prebivalci Slovenije 31.12.1999	*%*	*Respondents / Anketiranci 1. 9. 2000*	*%*
Men / Moški	49	Men / Moški	43,6
Women / Ženske	51	Women / Ženske	56,4

Table 2. *Professional characteristics (in %) of Slovene tutors-respondents (N=55).*
Tabela 2. *Poklicne značilnosti anketiranih slovenskih tutorjev (v %) (N=55).*

Characteristics / Značilnosti	*%*
Urban practice / Delo v mestu	40, 7
Rural practice / Delo na podeželju	25, 9
Mixed / Mešano	33, 3
Employed / Zaposleni	65,5
Private (»solo« practice) / Zasebniki	25,5
Other / Drugo	9,0
Public health care institution / Javnozdravstvena ustanova	67,3
Private health care institution / Zasebna zdravstvena ustanova	32,7
Postgraduate teaching activities / Podiplomski pouk	94,4

vignettes. In the male scenario, screening for colon cancer was reported by half of the participants, and in the female scenario by 11%. The use of chest X-ray as a screening test in male patients was reported by 29% of GPs. Only one third of GPs inquired about their patients' immunisation status, but moreof them were interested in their patients' health behaviour: nearly all checked smoking, and three-thirds advised smokers to quit. Alcohol intake in men was not strictly checked; two-thirds of GPs advised risky drinkers to reduce alcohol consumption or stop drinking. In male patients, body weight and height were measured by less than one half of the participants, and in females by more than one half; overweight patients were advised to loose weight. Physical activity was inquired after by three-fourths of GPs; two thirds of them also advised physically inactive patients to change their lifestyle. Screening for cervical cancer was recommended by one half of GPs.

Table 4 shows the perceived causes of poor prevention and health promotion, focusing on the differences in the perceived barriers. The EUROPREV study showed that more than half of Slovene GP tutors found it difficult to perform preventive check-ups and cardiovascular risk assessment in their patients, and the reportedly felt minimally effective, or ineffective in helping patients change unhealthy lifestyles, especially in advising them to take up regular physical activity. The main barrier reported was heavy workload and lack of time (Table 5).

GPs' self-reported state of health and health-related habits are shown in Table 6.

Table 3. *Responses of Slovene tutors-respondents (N=55) to the male and female clinical scenario.*
Tabela 3. *Odgovori sodelujočih slovenskih tutorjev na vprašanja v ženskem in* moškem kliničnem scenariju (N=55).

Risk factor assessment / Ocena dejavnikov tveganja	*Male patient / Bolnik*		*Female patient / Bolnica*	
	Should it be done (yes as %) / Je to treba storiti? (da v %)	Do I do it? (yes as %) / Ali to storim? (da v %)	Should it be done (yes as %) / Je to treba storiti? (da v %)	Do I do it? (yes as %) / Ali to storim? (da v %)
Measure cholesterol level / Določanje ravni holesterola	87,3	74,6	87,3	72,7
Measure blood pressure / Merjenje krvnega tlaka	96,4	94,6	98,2	89,1
Measure glucose level / Določanje ravni sladkorja	90,9	76,4	96,4	74,6
Inquire on smoking	100,0	95,4	100,0	86,7
Advise smokers to quit / Vprašanja o kajenju Nasvet bolniku naj opusti kajenje	100,0	72,7	96,4	74,6
Inquire on alcohol consumption / Vprašanja o pitju alkohola	98,2	74,4 63,6	100,0 96,4	68,2 63,6
Advice risky drinkers to reduce consumption Svetovanje tveganim pivcem, naj omejijo pitje alkohola	96,4			
BMI measurement / Izračun indeksa telesne mase	89,1	58,2	94,6	61,8
Diet advice / Prehransko svetovanje	96,4	70,9	98,2	72,7
Inquire on physical activity / Vprašanja o telesni dejavnosti	96,3	74,4	96,3	71,1
Advice sedentary patients to Increase activity / Svetovanje bolnikom, ki pretežno sedijo, naj bodo bolj telesno dejavni	94,6	61,8	94,6	63,6
Tetanus immunization / Cepljenje proti tetanusu	54,6	32,7	65,5	38,2
Screening for colon cancer - occult blood test colonoscopy Presejanje za raka debelega črevesa - pregled blata na okultno krvavitev Koloskopija	47,2 13,2	18,8 6,4	42,3 9,8	11,1 6,7
Screening for breast cancer - mammography / Presejalni test za raka dojk - mamografija			78,2	54,6
Screening for cervical cancer with Pap smear / Presejalni test za raka maternicnega vratu-odvzem brisa Pap			78,2	50,9
Prostate cancer screening (RDE /PSA) / Presejalni test za raka prostate (RDE /PSA)	78,2	56,4		
Lung cancer screening (X ray) / Presejalni test za pljučnega raka - rentgensko slikanje	38,2	29,1		

BMI: body mass index / indeks telesne mase
RDE: rectal digital examination / digitalna rektalna preiskava
PSA: prostate specific antigen / specifični prostatični antigen

Table 4. *Perceptions of Slovene tutors-respondents (N=55) of their implementation of disease prevention and health promotion.*
Tabela 4. *Kaj menijo anketirani tutorji (N=55) o svojem izvajanju dejavnosti za preprečevanje bolezni in promocijo zdravja.*

Activity / Dejavnost	*Yes as % / Da v %*
Carrying-out prevention and health promotion is difficult / Preventivne dejavnosti in dejavnosti za krepitev zdravja so zahtevna naloga	61,8 %
Minimally effective or ineffective in helping patients reduce tobacco use / Minimalna učinkovitost oz. neučinkovitost pri prizadevanjih za omejevanje kajenja pri bolnikih	41,8%
Minimally effective or ineffective in helping patients reduce alcohol consumption / Minimalna učinkovitost oz. neučinkovitost pri prizadevanjih za zmanjševanje pitja alkohola pri bolnikih	56,4%
Minimally effective or ineffective in helping patients achieve or maintain normal weigh / Minimalna učinkovitost oz. neučinkovitost pri prizadevanjih za pridobitev oz.vzdrževanje normalne telesne teže pri bolnikih	54,6%
Minimally effective or ineffective in helping patients practice regular physical exercise / Minimalna učinkovitost oz.neučinkovitost pri prizadevanjih za povečanje telesne dejavnosti pri bolnikih	25,9%

Table 5. *Slovene tutors-respondents' (N=55) perceptions of barriers to implementing health promotion and preventive activities (non-exclusive answers).*
Tabela 5. *Kaj menijo anketirani slovenski tutorji o ovirah pri izvajanju preventivnih dejavnosti in dejavnosti za krepitev zdravja (N=55).*

Barrier / Ovira	*Yes as % / Da v %*
Heavy work load and lack of time / Velike delovne obremenitve in pomanjkanje časa	92,7
No reimbursement / Neustrezno nagrajevanje	34,6
Patients' accessibility / Dostopnost bolnikov	20,0
Lack of consensus (discrepancies in the recommendations) / Neenotnost in neusklajenost priporočil	20,0
Patients' doubts about effectiveness / Bolnikovi dvomi o učinkovitosti	14,6
Lack of clarity on which professional in primary care is responsible / Nejasnost pri opredelitvi odgovornosti v primarnem zdravstvu	25,5
Insufficient personal training in prevention and health promotion / Nezadostna usposobljenost za preventivno dejavnost in krepitev zdravja	10,1

Table 6. *Slovene tutors'-respondents' (N=55) state of health and health behaviour.*
Tabela 6. *Zdravstveno stanje in zdravstvene navade anketiranih slovenskih tutorjev* (N=55).

Risk factor / Dejavnik tveganja	Yes as % / Da v %
Elevated serum cholesterol / Povišana raven holesterola	40,0%
High blood pressure (BP) / Povišan krvni tlak	21,8%
Smoking cigarettes / Kajenje - cigarete	9,1%
Cigars / Cigare	1,8%
Risky alcohol use / Tvegano pitje alkohola	3,7 %
Regular physical activity in leisure time / Redna telesna dejavnost v prostem času	60,0%
Immunised Influenza / Cepljenje proti gripi	49,1%
Hepatitis B / proti hepatitisu B	69,1%
Tetanus / proti tetanusu	80,0%
High risk of colon cancer / Povečano tveganje za raka debelega črevesa	9,1%
Screened for colon cancer / Opravljen presejalni test za raka debelega črevesa	10,7%
MALES / MOŠKI	
Prostate symptoms / Težave s prostato	3,5%
Screened for prostate cancer-/ Opravljen pregled za raka prostate	
digital rectal examination PSA / digitalni rektalni pregled	25,0%
PSA	41,7%
FEMALES / ŽENSKE	
Breast cancer risk / Tveganje za raka dojke	16,1%
Mammography performed / Opravljena mamografija	34,6%
Cervical cancer risk / Tveganje za raka maternične vratu	0,0%
Screened (PAP smear) / Odvzet bris po Papanicolauu	8,1%

Legend: / Legenda
Risky alcohol drinking: > 2 units/day for male and > 1 unit for female participants / Tvegano pitje alkohola > 2 merici na dan za moške in > 1 merica za ženske
Regular physical activity: activity daily or two to three times a week. / Redna telesna dejavnost: dejavnost vsak dan ali dva - do trikrat na teden
Immunised: every year or only some years / Cepljeni: vsako leto ali le v nekaterih letih
Risk of colorectal cancer was considered to be increased in persons with tubular adenomas of >1 cm, villous or tubulovillous adenomas of any size, hereditary gastrointestinal polyposis syndromes, personal or familial history (first degree) of colorectal cancer, endometrial cancer, ovarian cancer, ulcerative colitis of more than 8-10 years of evolution for extensive forms (pancolitis) or more than 15 years of evolution in ulcerative colitis of the left colon /
Povečano tveganje za kolorektalnega raka: tubulni adenoma, večji kot 1 cm, vilozni ali tubulno-vilozni adenomi, ne glede na velikost, familiarna polipoza črevesa, osebna ali družinska anamneza kolorektalnega raka (1. stopnja), rak endometrija, rak jajčnikov, ulcerozni kolitis, ki se je razvijal več kot 8-10 let (pankolitis), ali več kot 15 let (ulcerozni kolitis levega dela debelega črevesa)
Prostate cancer screening: at least one screening test carried out / Presejanje za raka prostate: opravljen vsaj en presejalni test
Breast cancer risk: increased in persons with personal or familial (first degree) history of breast cancer (higher risk if it was bilateral or occurred before menopause), precocious menarchy (<12 years old), nulliparity, first pregnancy in advanced age (>30 years), late menopause (>55 years old), hormone replacement therapy, hormonal contraception, obesity, breast ionizing radiations, high alcohol consumption / Povečano tveganje za raka dojke: osebna ali družinska (po ženski liniji) anamneza raka dojke (tveganje je še večje pri raku na obeh dojkah in pri raku, ki se je razvil pred menopavzo; zgodnja menarha (pred 12. letom starosti), nuliparnost, prva nosečnost po 30. letu starosti, pozna menopavza (po 55. letu starosti), nadomestno hormonsko zdravljenje, hormonska kontracepcija, debelost, ionizirajoče sevanje, čezmerno pitje alkohola
Cervical cancer risk: increased with the following factors: tobacco use, low socioeconomic level, precocious sexuality, high number of sexual partners, human papilloma virus infection / Povečano tveganje za raka maternične vratu: kajenje, slabe socialne in družbene razmere, zgodnja spolnost, veliko število spolnih partnerjev, okužba s papilloma virusom

Discussion

The extent to which people follow healthy lifestyles varies largely from one country to another (2, 13). EUROPREV is one of the networks, established to obtain and disseminate useful information provided by national associations and institutions to compare not only national health services, but also protocols and guidelines on the issue, and to run research projects, such as the survey described in this paper (11). The European network of GP colleges initiated specific research projects, such as the one involving more than 2000 GPs. As only 55 of the 100 invited Slovene GP tutors participated in our study, the results are not representative of the whole GPs population. The authors would therefore welcome information provided for this survey by other colleagues.

The survey respondents are likely to have a more favourable attitude to health promotion than the general GPs population, and as a result the results may have been overestimated because of bias.

It is difficult to compare our results with those obtained in other surveys because of different methods used.

The answers to the two clinical scenarios show that tutors are well aware of the importance of disease prevention and health promotion services, but that, in practice, they are less likely to provide them to patients presenting with most of the risk factors. One exception seems to be blood pressure measurement, most probably because it has become a routine procedure.

Answers to the female and male scenarios indicated that risk factors, except body mass index, were more frequently assessed in men than in women. The participating tutors obviously regarded risk factors in women as minor ones. Spanish authors (13), who evaluated preventive services in general practices, found similar results for counselling, but poorer results for cardiovascular risk assessment. Determining BMI in men was the most rarely reported procedure. This observation suggests that the

participating Slovene tutors consider weight, height and BMI measurements in men a waste of time, and regarded testing the success of dietary counselling on overweight and obese patients as a most ungratifying task. The measurements, however, were practised in female patients.

Questions about preventive activities that are either ineffective, such as screening for lung cancer, or not evidence-based, such as screening for prostate cancer, were purposefully included in the questionnaire. Surprisingly, nearly 40% of the survey participants answered they performed these tests in male patients, although no current guideline recommends routine screening for lung cancer (with either chest x-rays or sputum cytology) of either the general population or of smokers (14). As concerns prostate cancer screening, there is no clear evidence that survival can be improved by early detection and treatment of the disease. Routine screening for prostate cancer remains a controversial issue, with arguments against and in favour of the test (11). Slovene medical practice guidelines state that screening programmes should be proven to be beneficial before being implemented (8).

Among the barriers to disease prevention and health promotion implementation, the two leading causes reported by the 55 participating GP tutors included heavy workload/lack of time and no reimbursement. These were also two of the most important barriers identified by 2,300 GPs participating in a EUROPREV survey (11).

More than half of the GPs were sceptical about their ability to help patients reduce risky alcohol drinking, or achieve/maintain normal weight. Other surveys have yielded similar results: Dutch researchers state that counselling in general practice is often targeted at the wrong people, at the wrong time. Improvements can possibly be achieved by making registration of lifestyle parameters in patient records common practice, and by simply asking patients where they stand in respect to lifestyle change (15). Australian GPs compared the efficacy of brief one- minute counseling and counseling lasting ten minutes: in the latter the efficacy increased from 10% to 16% (16). Kreuter realised that successful disease prevention programmes in primary care settings will systematically detect patients who need preventive services, instruct them in the necessity of undertaking preventive activities, and use automated data systems to support and reinforce physician advice and preventive services. Physician advice that primes patients to act on subsequent health information will play an important role in this disease prevention equation (17).

The study revealed that nearly half of the participating tutors were at high cardiovascular risk; 40% of them were not physically active on a regular basis, and 40% had high serum holesterol levels. The fact is, however, that the study was conducted during a very busy "transition" period, characterised by radical political and social changes accompanying the transition from state socialism to capitalism in 1991. All those perturbances caused immense changes in lifestyles of the population,

and had profound implications for patients' and physicians' attitudes towards health (18).

Possible limitations of the study were that the questionnaire was too long, that it may have been subject to misinterpretation by the participants and was influenced by changing perceptions of disease prevention and health promotion activities. This seems to have been the reason for low response rate, which is also one of the limitations of the study.

On the other hand, the value of the study is that it provided important information about everyday practice of Slovene family medicine tutors. The results of this study stress the need for motivating GP tutors to provide preventive and health promotion activities in line with the adopted guidelines and last evidence. Under the 2002 regulations Slovene general practitioners are required to carry out preventive check-ups in 20% of their adult population, therefore new data are expected to be disclosed by repeat study. Other issues relating to this area should be addressed by the study, such as GPs' workload and possible changes in GPs' attitudes towards their own health behaviour.

Conclusions

1. The participating family medicine tutors feel minimally effective or ineffective in tackling most risk factors: i.e. in helping patients reduce tobacco use, alcohol consumption and achieve or maintain normal weight.
2. They do not give enough attention to their own health, health -related behavior and screening.
3. Slovene GPs should become more motivated to carry out disease prevention and health promotion activities.
4. Repeat study should be conducted in a few years' time.

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