

Barriers in the Delivery of Preventive Procedures in Primary Health Care

Ewelina Gowin*, Joanna Dytfeld, Michał Michalak and Wanda Horst-Sikorska

Department of Family Medicine, Poznan University of Medical Sciences, ul. Przybyszewskiego 49, 60-355 Poznań, Poland

Abstract

Objectives: Aim of the study was to evaluate general practitioners' opinions on barriers in the delivery of preventive procedures and ways of solving the problem. 100s of physicians working in Primary Care Practices in Wielkopolska Region (Poland), during a period in 2010, filled questionnaires.

Results: The most common barrier was lack of time and inadequate finances identified by 90% and 78% of doctors. Doctors' or patients' negative attitude to prevention was noted by 12% and 16% respondents. Insufficient skills and difficulties in updating knowledge were recognized by 9% of the doctors. As a solution 76% respondents pointed at increasing consultation time and 66% - to additional financial incentives. Some of surveyed doctors suggested the need for improvement of the national health programs and increasing their number. Workshops for medical staff were chosen by 48% of questioned doctors.

Conclusions: 1. Lack of time is the main barrier in the delivery of preventive procedures in primary care. 2. According to the asked doctors financial incentives would increase the amount of health promotion in primary care.

Keywords: Primary care; Prevention; General practitioner

Introduction

It is widely known that preventive procedures can be effective in disease prevention, but to be effective they must be performed. The aim cannot be achieved without the introduction of these procedures as a routine. Based on literature data, it is known that the provision of preventive procedures in primary care falls below recommended levels [1]. There are many barriers in implementation prevention. They can be identified at all levels of primary care system: patients, medical staff, and organization of healthcare. The system of primary care in Europe is theoretically well structured for health promotion as the population is registered with a single physician who provides a good opportunity for both systematic and opportunistic health promotion interventions. About 75-80% of people in European countries have a contact with general practitioner at least once a year [2]. In our study we have chosen preventive services which according to several guidelines should be delivered to all adult patients: tobacco use screening, problem drinking screening, weight measurement, BMI, waist circumference, blood pressure, diet and physical activity counseling [3,4]. Because of its complexity it is very difficult to compare primary healthcare in different countries. Solutions successful in one healthcare system may not be useful in another. So in order to set up effective programs for implementing prevention in Polish general practice, it is crucial to identify specific barriers. The first step to change this situation is identification of existing barriers. The aim of this study was to discover the opinion of general practitioners on the barriers in implementing prevention and ways to overcome them.

Materials and Methods

The presented study was performed as a part of PIUPOZ program carried out by Family Medicine Department of University of Medical Sciences, Poznan Poland. The acronym PIUPOZ states for Poprawa Iakosci Usług w Podstawowej Opiece Zdrowotnej (Improving Quality in Primary Care). The aim of the PIUPOZ was to improve the quality of primary care in Poland by offering training in preventive medicine for general practitioner.

A questionnaire study was performed among 106 general practitioners working in Wielkopolska region, participating in PIUPOZ program. The study sample was not randomly selected. Doctors were visited by observers. Anonymous questionnaires containing doctors' demographic characteristics and two closed questions

| What kind of barriers do you identify in implementation of preventive procedures in primary care? | | | | |
|---|---------------|-----------------|---------------|---------|
| doctors' age | <35 n=14 (%n) | 35-50 n=52 (%n) | >50 n=40 (%n) | p |
| Lack of time | 14 (100) | 49 (94.2) | 36 (90) | ns |
| Insufficient finances | 11 (78.5) | 34 (65.4) | 29 (72.5) | ns |
| Negative patients' reaction | 3 (21.4) | 4 (7.7) | 2 (5) | ns |
| Low effectiveness of preventive procedures | 1 (7.1) | 5 (9.6) | 2 (5) | ns |
| Insufficient skills | 3 (21.4) | 7 (13.5) | 3 (7.5) | ns |
| Difficulties in staying up to date with the guidelines | 4 (28.6) | 9 (17.31) | 7 (17.5) | ns |
| Doctors' gender | n=106 (%n) | Women n=69 (%n) | Men n=37 (%n) | p |
| Lack of time | 99 (93.4) | 63 (91.3) | 36 (97.3) | ns |
| Insufficient finances | 74 (69.8) | 49 (66.2) | 25 (67.6) | ns |
| Negative patients' reaction | 9 (8.5) | 6 (8.7) | 3 (8.1) | ns |
| Low effectiveness of preventive procedures | 8 (7.5) | 2 (2.9) | 6 (16.2) | 0.03675 |
| Insufficient skills | 13 (12.3) | 7 (10.14) | 6 (16.2) | ns |
| Difficulties in staying up to date with the guidelines | 20 (18.7) | 8 (11.6) | 12 (32.4) | 0.00896 |

Table 1: Barriers in the delivery of preventive procedures in primary care (depending on doctors' gender and age).

describing barriers in preventive procedures delivery were filled in by the doctors. All the questionnaires were returned to the Family Medicine Department in closed envelopes. In the first question doctors were asked to indicate the most important barriers in the delivery of preventive procedures (Table 1). In the second question usefulness of listed solution was evaluated (Table 2,3). For each question more than one answer was possible. Relationship between doctor's age, gender and

***Corresponding author:** Dr. Ewelina Gowin, Department of Family Medicine, Poznan University of Medical Sciences, ul. Przybyszewskiego 49, 60-355 Poznań, Poland, Tel: 0618 69 11 47; Fax: 605 723 017, E-mail: ewego@poczta.onet.pl.

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| What intervention can increase the delivery rate of preventive procedures in your practice? | | | | |
|---|-----------|---------------|-------------|---------|
| | % | Women n=69 | Men n=37 | p |
| Increasing time spent on prevention. | 45 (42.5) | 32(46.4) | 13(35.1) | ns |
| Financial incentives for delivery of preventive procedures. | 88(83) | 52(75.4) | 36 (97.3) | 0.00294 |
| Simplification of National Health Programs | 61 (57.5) | 38 (55) | 23 (62.1) | ns |
| Ongoing medical education for physicians | 33 (31.1) | 20 (28.9) | 13 (35.1) | ns |
| Additional person responsible for prevention | 57(53.8) | 33 (47.8) | 24 (64.9) | ns |
| Introduction of electronic medical records | 55(51.9) | 31 (44.9) | 24 (64.9) | ns |
| Increasing number of programs financed by National Health Found | 25(23.6) | 16 (23.1) | 9 (24.3) | ns |

Table 2: Ways of increasing the delivery rate of preventive procedures in primary care (depending on doctors' gender).

| What intervention can increase the delivery rate of preventive procedures in your practice? | | | | |
|---|------------------|-----------------------|------------------|---------|
| | <35 n=14 (%n) | 35-50 n=52 (%n) | >50 n=40 (%n) | p |
| Increasing time spent on prevention. | 5 (35.7) | 20 (38.5) | 20 (50) | ns |
| Financial incentives for delivery of preventive procedures. | 14 (100) | 43 (82.7) | 31 (77.5) | ns |
| Simplification National Health Programs | 7(50) | 30 (57.7) | 24 (60) | ns |
| Ongoing medical education for physicians | 7 (50) | 16 (30.8) | 10 (25) | ns |
| Additional person responsible for prevention | 8 (57.1) | 28 (53.8) | 21 (52.5) | ns |
| Introduction of electronic medical records | 5 (35.7) | 30 (57.7) | 20 (50) | ns |
| Increasing number of programs financed by National Health Found | 7 (50) | 10 (19.2) | 8 (20) | 0.04389 |

Table 3: Ways of increasing the delivery rate of preventive procedures in primary care (depending on doctors' age).

opinion was investigated. Doctors were divided into three age groups: younger than 35 years, 35-50 years, and older than 50 years.

Data were analyzed by chi-square test for independence. For 2x2 tables chi-square with Yate's correction or fisher exact test was used depending on expected frequencies values.

All tests were analyzed at significance level $\alpha=0.05$. Data were analyzed using statistical package Statistica 8.0 (StatSoft).

Results

A total of 106 doctors took part in the study: 69 women (65%) and 37 men (35%). Demographic characteristic is presented in Table 4. Response rate was 100%. The commonest identified barrier was lack of time (93.4%) and inadequate finances (69.8%). The insufficient skills or difficulties in tracing the changing guidelines were indicated by 12.3% and 18.7% of physicians. Negative patient's attitude was recognized by 8.5% of the studied population. Among the methods to solve the problem 83% of respondents pointed to additional reward for carrying out preventive activities and 42.5% to the increasing the length of a visit. More men than women pointed to financial incentives for delivery of preventive procedures as a factor increasing delivery of prevention. Some respondents opted for a simplification of National Prevention Programs and increasing their number. Regular training for medical staff as a way to improve the quality of services was indicated by 31.1% of respondents. Another proposal was to recruit an additional staff responsible for coordination of prevention activities, reported by 53.8% of doctors. 51.9% of asked doctors were in favor of introduction of electronic medical records.

Discussion

The provision of medical services in primary health care is under

severe time and cost pressure. These restrictions also apply to preventive activities. Yarnal et al. have calculated that the implementation of all recommended procedures in 30 patients consulted during one day would take 7.8 h [5].

Lack of time is a common problem, also reported in our study. Family doctors during consultation primarily deal with current problems and there is often not enough time for preventive measures and education. The task of a doctor is to make a patient as healthy as possible within ten minutes of routine consultation. So it is necessary to choose which procedures to offer and to whom. There are different guidelines and regulations on delivery of preventive procedures in primary care. Such procedures as mandatory vaccinations and reporting infectious diseases are required by law. Physicians are obliged to perform them irrespective of their personal view. In our study to identify physicians' opinions on barriers in the delivery of preventive procedures we have chosen preventive services which according to several guidelines should be delivered to adult patients, but they are not compulsory.

Some organizational improvements, such as hiring additional staff or the introduction of electronic medical records may contribute to the effective use of time and resources [1,6]. Lamelin et al. showed that after 18 months of intervention involving the employment of nurse responsible for coordinating the provision of prevention activities their implementation increased by 11.5% ($p<0.001$) [6]. Making preventive tasks the duty for the entire staff of the practice leads to better quality of the delivered preventive services [7].

Sharing responsibilities among staff allows better managing the doctor's time. Unfortunately, there are also disadvantages of such solution. They can be described as unintentional separation of prophylaxis from the therapeutic process as a whole. It should be strongly emphasized that prevention is as important as therapy. Delegation of responsibilities regarding prophylaxis to other employees can diminish the role of the physician, and also reduce his/her skills. Extreme specialization leads to the fragmentation of service, therefore impairs one of the most important features of family medicine that is complexity of care [5].

Insufficient finances are a common barrier to prevention discovered by the studied population. Given the dynamic development of medicine, there are no such funds that could be regarded as sufficient to carry out all possible examinations. In the U.S., health care expenditure per citizen are nearly two times higher than in other developed countries, and the provision of preventive procedures is still at only 50% of the recommended [8].

The solution is based primarily on rational decisions about the choice of action. The health status of the population can be significantly improved for lower costs if more attention is paid to efficiency [9]. Many costly procedures are offered without adequate indications, while the more efficient and cheaper are not executed.

Primary prevention is based on education; therefore it is less

| Age | all (n=106) | female (n=69) | male (n=37) |
|---------|-------------|---------------|-------------|
| mean | 46.2 | 46.91 | 44.9 |
| SD | 9.42 | SD 9.58 | SD 9.11 |
| 95% CI | 44.38-48.01 | 44.61-49.22 | 41.83-47.9 |
| mediana | 46 | 46 | 45 |
| min | 27 | 27 | 30 |
| max | 74 | 74 | 68 |

Table 4: Demographic characteristics.

appreciated by the patients. They believe more in preventive procedures based on laboratory tests, such as blood lipids and glucose measurement. Activities aimed at patients' expectations lead to negligence of primary prevention, and generate unnecessary costs. Not all procedures are, however, expensive are effective. One of the highest rated interventions - anti-smoking advice - involves only a doctor's time, and its effectiveness is very high [10]. It is estimated that among 50 patients receiving anti-smoking advice, one or two eventually quit smoking [11]. Anti-smoking counseling brings benefits not only to smokers, but also to their environment by minimizing the exposure to passive smoking, and reducing air pollution. Individual approach allows adjusting the prevention procedure to patient's needs.

Primary healthcare in different countries has different financing systems. Moreover, method of payment affects the quality of doctors' service. Gosden et al. found fee-for-service type of payment resulted in more primary care visits and greater continuity of care. However, patients were less satisfied with access to their physician compared with salaried payment [12]. The commonest solution chosen by Polish doctors were financial incentives for doing prevention. Such intervention was performed in United Kingdom. The introduction of Quality Outcomes Framework (QOF) in April 2004 changed the way that primary practitioners are paid. Financial bonuses depending on the medical service quality were designed to improve patients' outcomes and doctors' performance. The apparent success of this intervention caused international interest in using financial incentives as a method of improving general practice. The system of QOF operating in the UK was able to demonstrate the effectiveness of pay-per-performance remuneration for fulfilling the guidelines [13]. After the introduction of the program achievements rates were higher than expected. Median score was 85.6 % of maximum points [13,14].

The funds gained from the QOF system are up to 20% of practice income. The assessment takes into the account 146 indicators for 10 chronic diseases, organization of care and patient opinions. After the first year after implementation system has been shown to increase the number of preventive procedures performed [14].

Disadvantages of such system also exist. Consultations are more likely to be directed strictly towards prevention and achievement of the desired aims, while patients' needs are pushed into the background. There is also concern the procedures not promoted by the program will be neglected. Activities driven by a financial gain lead to diminished doctor's authority and weakened professional incentive. Financial benefits can be stimulating, but it definitely should not be a primary determinant of clinical behavior. Programs founded by the National Health Fund are also a way of promoting prevention, but they are directed only to specific groups of patients and involve additional paperwork. Doctors call for simplification of the procedures. Programs founded by National Health Found are coordinated by computer system. So it is necessary for participating practices to use computers. Electronic medical records are not common in Poland. Many older physicians are not used to using computers in their daily practice. This may explain why younger doctors more often opted for increasing the number of preventive programs.

According to the literature it is known that gender influences physician's performance in primary care [15-18]. Doctors' gender may affect their performance in a field of prevention. Bertakis and colleague found that female physicians were slightly more likely to check patients' blood pressure, but there no significant differences were seen in other non-gender-specific prevention procedures [17]. According to

Frank and Harvey female physicians reported systematically patient counseling more often than male physicians [18].

In our study male physicians were significantly more likely than were female physicians to report difficulties in staying up to date with the guidelines and were more skeptical about the effectiveness of prevention. Also more men wanted financial incentives for delivery of preventive procedures. This may be explained by traditional role model that men earn money for the family.

Commonly used methods to increase preventive activities are workshops for medical staff. Nearly all health professionals attend educational meetings and, on average, health spends a total of from one to three weeks per year at educational meetings. However, neither the physicians nor the literature data do not identify the lack of knowledge as the primary cause of the current situation. Only a limited impact of training on improving the provision of preventive procedures has been shown [19,20].

There are some weak points of our study. The study sample was not randomly selected but based on active recruitment of interested volunteers for the offered training program. This bias may select for physicians who are more motivated than the average doctor. Our findings are based on a limited investigation that formed a small part of a study primarily undertaken for another purpose. Although we performed our study in one region, many of the factors identified are not unique to Poland and are probably seen in different primary care settings in Europe.

In our study we focused on barriers related to the organization of preventive services based on general practitioners' opinion. There are different ways of evaluating doctors' opinion. The use of questionnaires seems to be appropriate to compare opinions. Age and gender structure of the doctors was representative for population of Polish doctors. High response rate may be explained by the method of questionnaire distribution. They were delivered directly to the practice and the same person collected completed questionnaires. Doctors were kindly asked to fill them immediately and return in closed envelopes.

The surveyed doctors declare positive attitude towards prevention, both for their part, as well as for the patients. Positive feedback is not everything, though. Prevention in primary care is a complex process that depends not only on a doctor and the patient, but also on the organization of the health care system. Only multifactorial interventions at different levels can permanently and significantly improve the extent of provision of preventive procedures [21]. Actions require both increased funding and organizational facilities. Identification of most frequent problems and pointing a way of solving them can decrease a time between initial diagnosis and treatment in hospital conditions. Improvement of health state of population and rise of patient's satisfaction are the overriding benefits from such changes.

Conclusions

1. Lack of time is a major barrier in implementing preventive measures in primary health care.
2. According to surveyed doctors, introduction of financial compensation would increase the number of preventive actions performed in primary care.

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