Structures and Practices in Clinical Preventive Services

Maryam Mohseny[1], Reza Shekarriz-Foumani[1, 2], Mansour Mohseni[3], Laleh Ghadirian[4], Hossein Jafari[5], Maryam Goudarzian[6], Parastoo Amiri[6]*

[1] Assistant Professor of Community Medicine, Department of Community Medicine, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran,
[2] Taleghani Hospital Research Development Unit, Shahid Beheshti University of Medical Sciences, Tehran, Iran,
[3] MD, Resident of Forensic Medicine. Iran University of Medical Sciences, Tehran, Iran,
[4]Assistant Professor of Community and Preventive Medicine, Knowledge Utilization Research Center, Tehran University of Medical Sciences, Tehran, Iran,
[5] Manager of Shohada Hospital. Shahid beheshti University of Medical Sciences, Tehran, Iran,
[6]Iranian Research Center on Healthy Aging, Sabzevar University of Medical Sciences, Sabzevar, Iran.

ABSTRACT

Introduction: The aim of this study is to determine the most important risk factors for commonly preventable diseases, counseling and education required for the Iranian community. Methods: This qualitative study was carried out in several stages. First, based on a resource overview, a questionnaire was designed and a semi-structured interview was carried out with a number of stakeholders, until data saturation. The interviews were analyzed by content analysis method and the results were subdivided into main groups and subgroups. Then, to determine the most important and priority groups and subgroups, a questionnaire was designed and in terms of triple criteria, significance, scientific acceptability and feasibility were evaluated. In the third stage, using the results from the second stage of the research, the initial structure of the preventive and health promotion clinics was designed and finalized in two Delphi rounds. Results: The main groups of the structure of the prevention services provider included levels of service delivery, information resources, financial resources, human resources, information, and follow-up. The subgroups included: First level: patient visit by nurse or health expert; Second level visit by nutrition expert; Third level visit by mental health expert; Fourth level: Medical services of prevention and health promotion; Fifth level referral to social worker; Sixth level specialized and super specialized clinical services, and others groups included: information resources based on the use of existing country guidelines or the use of guidelines and their localization, funding using state resources, research grants, human resources required including nurse or health expert, nutrition expert, psychologist, physician, social worker, setting up prevention site, using the brochure while waiting, using health volunteers, using media, pamphlets, posters, billboards - using journals and articles and finally using a reminder card and follow-up telephoning for patients. Conclusion: Establishment of preventive and health promotion clinics is an integral part of health services providers' structures and requires new research to evaluate the effectiveness of interventions in these centers.

Key Words: *Preventive Clinics, Preventive Services, Health Promotion.*

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INTRODUCTION

According to the Ottawa Declaration and five other declarations, the latest in Thailand in 2005, empowering individuals to increase their health control [1] is one of the main strategies for reducing health and mortality and disability costs. Health promotion services whose efficiency and effectiveness are confirmed in valid studies are categorized into two categories [2, 3]. The first category, general health promotion services including

Corresponding author: Parastoo Amiri
Address: Iranian Research Center on Healthy Aging, Sabzevar University of Medical Sciences, Sabzevar, Iran.
E-mail: ✉ Amiri.Parasto @ gmail.com
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smoking cessation services, reducing alcohol consumption , increasing physical activity and diet modification, and the second is the specific health promotion services that target specific groups of patients [4, 5].

Since a risk factor can contribute in several diseases, by intervention on this risk factor and reducing the frequency and severity of the effect, the frequency and severity of a large number of diseases, corresponding to the severity of the effect of that risk factor, is reduced. For example, if the incidence of obesity is reduced to normal levels due to interventions, then 439878 years, that is, 3.31 of the DALYs occurred in the community are reduced, and, as a result, the burden of diseases is reduced as follows: The heart muscle ischemia is 14,776 years or 17.2%, knee arthritis 130555 years, or 44.8%, stroke 112,015 years, or 32.07%, diabetes mellitus 45507 years, or 28.8%, colon cancer 1452 years or 6.3%, breast cancer 1397 or 605%, uterine cancer 889 years old or 31.3%, kidney cancer 335 years old or 12.6 [6, 7].

In our country, prevention services are almost exclusively the responsibility of environmental issues in the health system, and hospitals have the same traditional roles of diagnosis and treatment, and for services at different levels, such as the prevention of disease in healthy people, the assessment of risk factors such as obesity, inactivity, risk assessment and early detection intended to investigate the risk factors of commonly preventable diseases, counseling and training needed by patients, and healthy lifestyle education [8, 9]. There is no defined structure for life style modification or is presented sporadically [10]. For this reason, the definition of new health promotion services and the design of health promotion and prevention centers that provide these services in a structured way are absolutely necessary. The purpose of this study is to offer a comprehensive structure called preventive and health promotion clinics.

ANALYSIS METHOD

This research was conducted in an applied and multi-stage manner. Initially, in order to determine the components and dimensions of the package of preventive services, a questionnaire for a semi-structured interview was designed based on resource overviews, A search was carried out in Google Scholar, Google, Embase, National Guideline Clearinghouse, World Health Organization (WHO), PubMed, NICE and Cochrane databases to find structures of clinical preventive services in different countries, Then based on the DONABADIN model, the components of the preventive services were classified into three categorized: input, process and output. This questionnaire was sent to 10 experienced people and experts in this field (based on the Waltz and Basel content validity index). After completing the questionnaire, the data were collected by a number of beneficiary people employed in health and medical centers and executive levels of interviewing. Participants were selected based on purposeful sampling. By performing 15 interviews, data saturation was obtained and then all interviews were analyzed by content analysis method and divided into main groups and subgroups based on the topic.

In order to determine the most important and top priority groups and subgroups, based on the concepts extracted, a questionnaire was designed and, in terms of triple criteria, significance, scientific acceptability and feasibility all groups and subgroups were evaluated. Then, the questionnaire was sent for 55 faculty members (for each of the components and indicators, a score of 1 to 5, for example, the score of 1 means not important and, the score 5 means very important).

In the third stage, using the components and indicators from the second stage of the research, the primary model of preventive and health promotion clinics was designed. The designed model with a questionnaire with 15 closed questions and a general open-ended question was provided to 60 qualified people to submit their comments on the various sections of the model (Delphi Phase I). Corrective comments were revised under the supervision of the scientific committee and the reviewed model with questionnaire was provided to 40-member of experts (about 30 of them from Delphi's first phase) and the comments of 30 of them were collected.

RESULTS

After 15 interviews and data saturation, all interviews were analyzed by content analysis method and a general picture of the structure and services of prevention clinics was determined based on 10 groups and 22 subgroups. Based on the determine groups and subgroups, 55 questionnaires were prepared and sent, and 50 questionnaires were returned. Out of 50 returned questionnaires, the components and indices with an average score of 3.75 for each of the three criteria of importance, scientific acceptability, and applicability (feasibility) were retained in the study, and the remaining items were excluded and after two Delphi rounds, the related concepts were categorized into 6 main groups and 11 subgroups. The main groups extracted from the interviews are as follows: levels of service provision, information resources, financial resources, human resources, information, follow up. In each group, a subset of its subgroups and its components were defined. The final results of the structure and prevention services are summarized in the table.

Table 1: Primary groups and subgroups of prevention structure and services, Based on literature review and expert's opinion [11-20]

Levels of service delivery in prevention and health promotion clinics	First level of services at the clinic: Nurse or health expert 1. History 2. Completing physical activity forms, smoking and alcohol and high-risk sexual behaviors-counseling for psychotropic substances-counseling for harm and violence and determining the risk of cardiovascular disease over the next 10 years 3. Determining height and weight and BMI, abdominal circumference, determine the visual state with the Snellen chart Second level of services at the Clinic: Nutrition expert 1. Completion of the nutrition status questionnaire 2. Getting history and examination of the nutritional status 3. Analysis and interpretation of nutrition status 4. Training Clients 5. Referral of at-risk people or patients to diet clinics 6. Exclusive breastfeeding consultation in newborns Third level of services in the clinic: psychologist 1. Complete the mental health status questionnaire 2. Getting history and examination about mental status 3. Analysis and interpretation of mental status 4. Training Clients 5. Referral of at-risk patients or patients to counseling clinics or physicians or psychiatrists The fourth level of services: medical services of prevention and health promotion clinic 1. Review of history, complete physical examination and risk assessment Screening services 2. Screening for breast cancer 3. Screening for colorectal cancer 4. Screening for cervical cancer 5. Screening of hearing impairment in the elderly 6. Screening for hypertension 7. Screening of visual impairment at pre-school age 8. Screening for skin cancer 9. Screening for depression and postpartum depression 10. Screening of thyroid diseases 11. Screening for diabetes 12. Screening for hypercholesterolemia 13. Screening of blood lead levels in children 14. Screening for glaucoma 15. Screening of hearing impairment in children 16. Screening of iron deficiency anemia Chemoprophylaxis services 1. Chemoprophylaxis prevention after exposure to infectious diseases 2. Chemical prevention by vitamins for cancer and coronary artery diseases 3. Chemical prevention by Aspirin 4. Chemical prevention on travel Vaccination services 1. Principles of safety prevention 2. Vaccination of children 3. Adult vaccination 4. Vaccination for the elderly, vaccination on special occasions Additional services 1. Review Level 1 and Level 2 reports 2. Request for para clinical testing and referral of individuals for testing as needed 3. Referral to the center of imaging and ultrasound according to the physician's discretion 4. Determining the health status (Healthy, patient, at risk) and require diagnostic or referral actions 5. Home visit for example for Mothers and infants in Postpartum period or for the elderly Fifth level: Referral to a social worker if necessary Sixth level: Providing services: Providing specialized and super specialized services If it is part of the Center's commitment and will be done according to the referral protocol that will be provided.
Information Resources	Use existing country guidelines or use the localized version of guidelines
Financial resources	Government resources, research grant
Human Resources	Community medicine Specialist, Family Medicine Specialist, Psychologist , General Physician, Nurse or health expert, Nutritionist, Social worker
Information	Setting up prevention site, using the brochure while waiting, using health volunteers, using media, pamphlets, posters, billboards - using journals and articles
Follow up	Using reminder card, follow up on the phone

DISCUSSION

Many studies have been conducted to examine the impact of prevention services on reducing the underlying causes of mortality. Based on this evidence, today, physicians have a reasonable belief that providing prevention services in reducing the burden of diseases and managing risk factors is highly effective and cost benefit [21]. The best way for prevention, is coordinated efforts to identify and reduce common and important risks, and take advantage of the opportunities provided for prevention, and addressing the major risks can promote global health much more than it was supposed to promote [22]. One of the many components of risk reduction strategies is behavioral change. However, the success of some types of behavior change may require active government intervention. Various ways have been discussed to achieve a single goal, for example, a community approach versus an individualized approach and a preventive approach versus a treatment-based approach. The combination of these two approaches would probably be the best way to promote health.

The existence of a prevention clinic or health promotion office is an essential component of service provision [23], which has to be defined at different levels, depending on the different services provided. In studies it has been estimated that a provider of prevention services with a median number of patients within a day would need more than seven hours to provide the usual prevention recommendations. Therefore, the use of non-physician caregiver such as a nurse, is very helpful for reviewing the patient's situation prior to the appointment of a physician and a patient in the implementation of prevention strategies [24], and makes the physician find more time to design preventive, guidance, and symptom-based care policies. In our study, caring was defined according to expert's opinion in six main levels, which would result in more accurate and specialized services, but not by imposing a high cost on the patient.

One of the important components extracted from this study is the provision of services in the prevention clinic. Based on extensive studies and experiences of other countries in this area, preventive interventions implemented in health promotion hospitals and conducted by our research in general, can be divided into two main domains:

In general, the nature of interventions in prevention clinics includes screening, counseling, recommendations and empowering individuals to increase their capacities and capabilities, although patient education and rehab programs are also other examples of these interventions aimed at empowering a person to manage their illness [25].

After the first visit and registration of the patient's diagnostic information and assessments, his/her follow-up is done in order to remind of the services that are currently in need, or since the deadline of the service [26]. Emails, letters, postcards or telephone are a variety of reminders that according to our study, reminding cards and follow-up telephone can be used [27, 28].

In order to inform and encourage people to welcome these services, a prevention website should be set up, and tools such as poster installation in various hospital environments, information brochures, training classes, videos about screening services, and most importantly, public media, such as radio and television [29] should be applied.

Finally, in order to overcome financial difficulties, which according to expert opinion, is one of the most important obstacles to the establishment of the system, the use of government resources, research grants, performance-based contracts, and the use of volunteer workforce, such as medical students, are proposed.

CONCLUSION

Hospitals, with physicians, can have a good basis for prevention services if they have a preventive and health promotion clinic. The service package provided in this study can be a good guide for providing services in these clinics.

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Conflicts of interest

There are no conflicts of interest.

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