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The role of the general practitioner in the CINDI programme

Report on a WHO meeting

Heidelberg
11–13 April 1991

1992

Keywords

PHYSICIAN'S ROLE
PHYSICIANS, FAMILY – trends
NONCOMMUNICABLE DISEASE CONTROL
CANADA
EUROPE
AUSTRIA
BELGIUM
BULGARIA
CZECHOSLOVAKIA
FINLAND
GERMANY, FEDERAL REPUBLIC OF
GREECE
HUNGARY
ICELAND
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Introduction

The WHO Countrywide Integrated Noncommunicable Disease Intervention (CINDI) Programme works to develop a unified approach, applicable in all settings by a variety of professionals and sectors, to the prevention and control of noncommunicable disease. As part of this effort, a meeting was held in Heidelberg to consider the role of the general practitioner and other practising physicians in health promotion and disease prevention within the framework of the programme. The participants comprised general practitioners and people responsible for the work of general practitioners in each of the 14 countries active in CINDI[a], as well as representatives of several WHO collaborating centres on primary health care, a number of practising physicians for the *Land* of Baden-Württemberg, Germany, other experts and staff of the WHO Regional Office for Europe. Background documents and the participants are listed in Annexes 1 and 2, respectively. The goals of the meeting were:

- to review the experience of general practitioners and other physicians with the prevention of noncommunicable disease;
- to examine opportunities, obstacles and approaches to promoting collaboration between general practitioners and others in the health and other sectors; and
- to recommend to general practitioners, CINDI programme directors and the CINDI office in the Regional Office measures to promote integrated approaches to the risk factors of noncommunicable disease by general practitioners and their professional associations.

At the meeting, the term general practitioner meant any medical professional giving primary health care (and thus included, for example, paediatricians, and gynaecologists in countries where these provide primary care).

[a] The names of countries used in this document are those that applied when the Heidelberg meeting was held.

New Roles for the General Practitioner

Primary care physicians are poised to address the key challenge of the European strategy and targets for health for all: ensuring the key role of primary care and enhancing its potential and scope. The targets employ a holistic concept of health and call for the provision of health care close to where people live and work, support for family medicine and the integration of health promotion with other measures. The practical implications of the WHO targets for general practitioners include:

- the maintenance of professional independence;
- active cooperation with community groups;
- the development of the "permanent family doctor system";
- the provision of opportunities for continuing medical education and for exposure to scientific advances in all dimensions of health.

Broadening practice to serve society

Formulations of the role of the physician in the primary care team should be accompanied by practical guidance on how to live up to this responsibility. Each individual and all groups are expected to contribute to the four classic goals of medicine: health promotion, disease prevention, treatment and rehabilitation.

Some measures can be classified as serving different aims, depending on the circumstances. For example, advice to restrict salt consumption may be regarded as a preventive measure for the population at large, or as part of the treatment of a hypertensive patient. In any case, clinical medicine forms a functional unity to attain its four aims. For example, lifestyle change and drug therapy can be recommended to an individual to combat several diseases. Years of dialogue with patients and community groups have shown that the public sees the four classic aims as parts of a whole.

The particular measures or activities used to achieve these aims will depend on the tools, methods and competence of the groups involved and the particular goal towards which they are working. Groups from different sectors can cooperate productively to

implement health measures so long as they can pursue their agendas simultaneously (as in the case of promoting fitness for both business and health reasons). Effective cooperation also requires a clear definition of responsibilities. General practitioners may extend the range of their clinical practice to include such activities as:

- motivating, supporting and promoting other groups;
- promoting cooperative approaches;
- learning about the health needs of the populations that they serve; and
- becoming familiar with the health programmes available in the community.

Three levels of activity

To be effective in the prevention and control of noncommunicable diseases, general practitioners must pursue the four aims of clinical medicine at three levels: consultation, group therapy and community activities. The three levels complement each other; for example, individual management of patients may be supported by groups or community programmes. The aim should always be to implement a broad range of measures. Primary care physicians may thus consider:

- seeking a working knowledge of behavioural methods for use at each of the three levels;
- promoting the appropriate use of measures acceptable to the various groups in the population;
- inviting the participation of other professional groups with special expertise such as health educators; and
- recruiting colleagues in other specialties to offer education courses to medical and non-medical groups alike.

Studies conducted in Germany under the auspices of the CINDI programme (discussed below) provide evidence of the value of group therapy and physicians' involvement in the development of community programmes. They also show the relative ease with which preventive measures can be built into routine medical practice (for the prevention of cardiovascular disease of joint disorders, for example).

The evaluation of the CINDI project in Baden-Württemberg (discussed below) points to some practical conclusions on the functions of primary care physicians. The traditional physician-patient contact in an individual consultation is poorly suited to achieve a lasting reduction of risk factors in many people, such as those who have suffered heart attacks. Group therapy promises to increase the effectiveness and efficiency of individual medical consultation. General practitioners should give their patients opportunities for group therapy. This would help the physicians to create services for the population that would support their work with individuals. For example, heart groups have been found effective in increasing the rates of control of hypertension.

In most industrialized countries, almost everyone in the population undergoes a medical examination every three to five years. This gives general practitioners the chance to integrate measures to prevent atherosclerosis into their usual practice, at low cost to the health system. To control atherosclerosis and its attendant conditions, however, diagnostic and management guidelines are needed for use not only with individual patients but also with the population at large.

The responsibilities of general practitioners, particularly in group therapy and community activities, need clarification. It may be argued, for example, that the physician should retain some control of and responsibility for the activities of groups, except self-help groups. These form part of a broader social approach to dealing with health problems in the community, and are independent of physicians. Further, although the physician should be responsible for the activities of other patient groups, this does not mean that he or she must always be present. Postgraduate skill building and training in dialogue with patients and group discussion techniques would help general practitioners to promote group therapy and work in the community.

Requirement for a new concept of clinical medicine

General practitioners should always take responsibility for their clinical activities. At all three levels, these clinical activities should form a unity and be connected to other activities in the health and other

sectors. It would be important, for example, to plan and evaluate group and community services that support consultation work. Further clinical activities at all levels should include diagnosis and treatment. The methodology for diagnosis and treatment in group therapy and community activities, however, is in its infancy; developmental research is needed.

The clinical activities of general practitioners should be subjected to quality assurance. A focus on indicators of quality and outcome would inject into the public health system the kind of focus on results that prevails in business. For example, physicians should ideally know the trends in prevalence rates of risk factors in the community. By the same token, mayors may consider tracking and measuring health service performance in terms of the levels of consumption of hazardous substance in their cities.

General practitioners must be assured of independence to carry out clinical activities. This is particularly important because of the variety in physicians' interests, understanding of issues and capacity to accept responsibility for activities at different levels.

Primary care may act as a catalyst to bring about an intersectoral and pluralistic approach to the solution of health problems in society. General practitioners should aim to create as many measures as possible – in health promotion, disease prevention, treatment and rehabilitation – to meet the needs of all groups. Some overlap of measures may desirable, as it may create a synergism of efforts and increase their acceptability to patients and other members of the community.

Research and training

Experience with CINDI in countries (discussed below) shows the value of cooperation between general practitioners and other professionals, within and outside the health sector on research, training and other activities. The work of general practitioners gives them contact with the population that offers important opportunities for research. Physicians who have taken these opportunities – including those working with partners such as a university or a pharmaceuticals company – have produced valuable results.

Well grounded, broadly based and sustained applied research is almost a prerequisite for attaining the WHO targets, and the Regional Office has provided recommendations on research policies for health for all.[a] Some changes in administrative and in health care structures, however, are needed to facilitate the participation of general practitioners. For example, interested physicians would need time and remuneration for research work. Priority areas for research development and training are:

- new methodologies for training general practitioners in prevention;
- techniques for mobilizing the community and educating health care personnel in teamwork;
- the use of primary care to support self-help and lay care;
- the assessment of quality of care;
- the determinants of risk factors and of unhealthy lifestyles;
- the ambulatory monitoring and evaluation of drugs; and
- systems for sharing experience and knowledge among general practitioners.

Primary care physicians should participate in the identification of research priorities, the design of protocols and the organization of investigations. Most important, they should be prepared to integrate the scientific knowledge that they gain into their practice.

Local information systems

General practitioners should take part in the establishment of computerized health information systems in both large and small population areas. Subject to confidentiality requirements, such systems should integrate data from a wide variety of sources: individual patients and physicians' practices, the organizations of health professionals and non-health sectors. Intersectoral and interdisciplinary cooperation is clearly needed to achieve this type of integrated health information

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[a] *Research policies for health for all.* Copenhagen, WHO Regional Office for Europe, 1988 (European Health for All Series, No. 2).

system and to facilitate the dissemination of information between disciplines and sectors.

General practitioners should be encouraged to use a core set of indicators (such as high blood pressure, hypercholesterolaemia and certain behavioural habits) to monitor patients' risk profiles. If collected in a standard manner, these data could be aggregated to calculate prevalence levels and trends in practices and communities. These data sets should also allow some comparison of the quality of primary care in different areas.

The future perspective

The way ahead for prevention is still unknown. Nevertheless, research and intervention on the "diseases of civilization" (such as atherosclerosis) will focus increasingly on so-called healthy groups, which are representative of the normal population. The word patient may soon describe a healthy person, as well as someone who is ill. Research is needed to develop diagnostic and therapeutic tools to improve the effectiveness and efficiency of measures applied to the healthy population.

Recent Experience with Changes in General Practice

WHO collaborating centres in primary care

Realizing the potential of the general practitioner to contribute to the CINDI programme requires cooperation between the various health professionals involved in prevention: physicians, nurses, health educators and other health care workers. Training in family medicine, patient education and staff support would facilitate the practice of prevention among general practitioners. The WHO collaborating centres for primary health care in the European Region promote the evaluation of innovative primary health care strategies. They also support the exchange of experience between countries, whether they are active in CINDI or not.

Belgium – Prince Leopold Institute for Tropical Medicine, Antwerp

Although most general practitioners in Belgium work alone, on a fee-for-service basis, and deal with secondary and tertiary prevention, a number of developments augur well for the strengthening of primary care. About 80 health centres have been created, often by physicians with working experience in developing countries. Eight centres operate on a capitation basis with a registered population. Interdisciplinary home care teams are being created with the support of the health authorities. General practitioners are working through their professional associations to coordinate their activities with those of other health professionals. This initiative is particularly successful in rural areas, where there is less competition among providers.

The Public Health Research and Training unit of the Institute has a programme to support training and research in the federation of health centres. A medical record is currently being pilot-tested to facilitate the comprehensive assessment of chronic conditions by general practitioners, the evaluation of the treatment given and the appropriateness of follow-up. The health ministry is considering a number of options to promote uniform use of the medical record, along with other possible measures to regulate the payment of general practitioners by the social security scheme.

Greece - Spili Health Centre, Crete

Health centres are being established in Greece to provide primary health care, as required by the national health system legislation of 1983. This care includes: preventive services (such as those for health education and family planning), medical care (both ambulatory and emergency care), social welfare services, rehabilitation, and social, medical and epidemiological research.

The centre in Spili has carried out a population survey of risk factors and chronic conditions. General practitioners have been involved in implementing a computerized information system to track and analyse the use of health services. The centre has collaborative ties with the Department of Social Medicine of the University of

Crete and with the University of Lund. An American Health Foundation programme ("Know Your Body") has been implemented in three high schools; an evaluation of the first year showed positive results.

General practitioners are involved in a number of activities to support the effective delivery of primary care. These include: educating medical students, organizing health services (by deciding the functions and roles of health teams and selecting medical and laboratory equipment), forming networks to provide home care and carrying out studies to adapt health practices to suit the cultural norms and vernacular language of the community. Some challenges that face primary care delivery in Greece are: the development of decentralized organizational models for the delivery of primary care, the provision of continuing training to staff on activities to support epidemiological research, and the diffusion of primary health care research programmes to health centres across Greece.

Netherlands – Netherlands Institute of Primary Health Care, Utrecht

The Netherlands Institute of Primary Health Care (NIVEL) carried out a comprehensive national survey of general practice to study needs for care, the supply of and demand for services and differences between practices. The cross-sectional approach was used. The survey documented the widespread prevalence of the additional morbidity attendant on most chronic conditions. This finding shows the importance of the general practitioner as coordinator of care.

The study provided estimates of preventive care delivered through general practice for a variety of chronic conditions. It also permitted an analysis of the patterns of variation of care delivered by age, sex, socioeconomic status and rural or urban location. Need/use ratios were calculated by comparing the prevalence rates of chronic conditions that present in general practice with the rates calculated from population surveys. These indices have uncovered major differences between urban and rural general practitioners, with respect to cancer, heart disease and diabetes, for example.

The NIVEL study shows the potential for health promotion and disease prevention in general practice. Two priorities for action are:

improving the organization of general practices in inner city areas and developing protocols and standards of care and evaluation in general practice, for such preventive activities as cervical smears, mammography and addiction counselling. The challenge now is to fill gaps and follow up on opportunities in the context of the combined pressures on general practitioners in the Netherlands: the provision of services 24 hours a day, 7 days a week, improvement of the quality of care, increased involvement in health promotion and disease prevention activities and competition with specialists for the care of patients with noncommunicable diseases.

Spain – Andalusia School of Public Health, Granada

Spain introduced the specialty of family and community practice in 1979 and initiated sanitary reform in 1986. The creation of health care teams is being encouraged as a means to include epidemiologists, health educators and decision-makers in the planning and delivery of primary care services. General practitioners are now required to assume full-time assignments, which increased the amount of time spent in consultation with patients. A network of primary health care centres is being set up to deliver integrated care at the community level. These centres are responsible for implementing community interventions in a defined geographical area.

The centres are producing a variety of programme models. Some target diseases, while others primarily address risk factors, groups at risk or both. Most programmes offer a core package (focusing, for example, on hypertension, smoking and alcohol use). The Family and Community Medical Association has developed standards to promote the long-term evaluation of preventive programmes and new organizational models.

Countries active in CINDI

Austria

Surveys carried out in the county of Vorarlberg according to the CINDI protocol show a widespread prevalence of the major risk

factors. Dietary patterns of the population are a major concern: about 50% of total energy is derived from fat.

The CINDI programme in Vorarlberg works in the context of the activities of the Association for Preventive and Social Medicine (Arbeitskreis für Vorsorge und Sozialmedicin-AKS). The core of AKS is a group of about 150 physicians who have assumed responsibility for a broad range of preventive activities.

Support from the community is essential. Public education campaigns were launched in 1990 through newspapers, telephone calls and participation in industrial exhibitions. Work with groups complements individual approaches. "Gesunder Lebensraum" is a health and social initiative that operates in the community. It has 10 self-help groups, focusing on, for example, gymnastics, gymnastics for overweight people, health education in elementary schools and help within the neighbourhood. "Women 50 plus" is a comprehensive programme to enhance the quality of life of women aged 50 years or more by targeting cardiovascular disease risk factors, osteoporosis, arthritis and depression. The programme also offers mammography. Gynaecological check-ups are offered to women aged 20 to 60 years. Coronary groups have been established in each town of the county to offer rehabilitation services to people who have had heart attacks.

"Early diagnosis of cancer and metabolic and circulatory diseases" is a major screening programme, in which about 150 general practitioners supported by 22 internists carried out over 3300 check-ups in 1989. About 20% of the adult population in Vorarlberg is screened every year. Attractive programmes are needed to influence children and adolescents.

The Vorarlberg CINDI programme is a unique model of a comprehensive approach to disease prevention and health promotion organized by physicians. The AKS physicians have direct links to the county government (which gives political and financial backing) and the medical community. Relations with social medicine programmes are strong, since these programmes form part of the AKS mandate.

Policy is developed through consensus at several levels: government (regional and federal), the medical community, the social security system, the community, industry and other CINDI countries.

The intention is to create an atmosphere that encourages innovation in health promotion and cooperation between health professions.

An evaluation of the programme will emphasize processes in the short term. Experience has shown that appropriate payment attracts physicians to participate in organized prevention programmes.

Bulgaria

In Bulgaria, the general practitioner plays an important role in CINDI as coordinator of the work of the primary care team on health promotion and disease prevention. As to noncommunicable disease, general practitioners are involved in screening, follow-up and health education. The role of the general practitioner can be extended to other areas of family and holistic care.

The CINDI programme has organized continuing medical education courses for primary care physicians. Areas in which needs are greater – such as cardiovascular disease prevention, treatment and rehabilitation – are emphasized. Some priority organizational issues for examination and research are the dynamics of the patient-doctor contact and the utility of reimbursing general practitioners for certain health promotion and disease prevention activities, subject to appropriate evaluation.

Canada

The Canadian health system provides comprehensive health insurance for doctors' fees and hospital expenses. The federal Department of National Health and Welfare sets national standards to ensure accessibility, portability from province to province and public administration of the different components of the system. General practitioners or family physicians comprise about 50% of physicians in Canada.

Professional associations such as the College of Family Physicians are influential in promoting the role of the general practitioner in prevention. The College publishes its own journal, offers continuing education courses, seeks the adoption of educational objectives for the family medicine departments in all faculties of medicine and

administers a certification examination for family medicine. All faculties of medicine offer a two-year specialization course in family medicine.

The College of Family Physicians has had particular impact in promoting prevention by general practitioners in Nova Scotia. The Faculty of Medicine at Dalhousie University has a one-year community medicine training programme which conducted about 150 training sessions in 50 hospitals in 1990, reaching 1800 family practitioners. In addition, an innovative research project will determine and evaluate effective means of introducing the prevention and control of cardiovascular diseases in general practice.

The Task Force on the Periodic Health Examination produced guidelines for about 100 preventable conditions. Although supporting the work of the Task Force, the federal Department of National Health and Welfare is not involved in the scientific process of guideline development. A Department initiative promotes the practice of prevention by general practitioners and other health professionals. Workshops have been held to stimulate collaboration between professions and to develop a national strategy to address the issue over the long term. For physicians, the priority areas for follow-up were: increased community-based training, the development of skills to work with community groups; provision of tools and systems to support prevention and training in the prevention of cardiovascular disease.

Czechoslovakia

The CINDI programme in Czechoslovakia completed a comprehensive risk factor survey of about 3000 adults in 1985; a follow-up survey was made in 1990. The database should provide a context for the design of targeted interventions and mobilize general practitioners to incorporate preventive measures in their work.

Preventive health care has been recognized as a priority in the changing health care system. As in other CINDI countries, however, two important barriers to prevention in primary care need to be overcome: lack of time and shortage of resources. Collaborative activities within CINDI would increase the ability to capitalize on policy opportunities.

Finland

In Finland, primary care staff are moving towards work in multiprofessional teams helping patients as equal partners to increase control of their health, a system that gives more responsibility to the general practitioner and information systems that support everyday work and communication. Evaluating the impact on practice of change in legislation on health care systems is a priority.

Germany

General practitioners in Germany are private physicians independent of state agencies, whether specialized or not. Patients are free to choose a physician, whose income depends on the number of patients.

The *Land* of Baden-Württemberg has about 13 000 general practitioners who must be convinced of the suitability of the CINDI programme, in which about 200 physicians are involved at present. The programme operates at three levels: individual consultation, group treatment and community activities. The physicians involved have formed health circles for citizens and representatives of community organizations in 16 cities. They carry out health education and health promotion activities in schools. In Stuttgart, for example, a physician, a dentist and a pharmacist pursue these activities as a health promotion team. Team members are recruited through advertising in professional journals. Teams meet periodically with teachers and parents to plan health education activities. Clear positive behavioural changes have occurred. In addition, physicians have sometimes negotiated with bakeries for the production of healthier products.

Experience shows that general practitioners needs to be flexible and to take a holistic approach to health in working with groups. The physician's activities should always include evaluation; in addition to their usefulness to the individual, evaluation data could be pooled to create an information base of intervention methodology. The new German health reform law should facilitate the involvement of general practitioners in developing prevention programmes. It will allow companies to pay for preventive and health promotion activities of demonstrated effectiveness.

Hungary

In Hungary, paediatric general practitioners provide continuity of primary care for children from birth to the age of 14 years. Social nurses make home visits to monitor women during pregnancy and after birth up to the child's third birthday. They link the mother and the family to the gynaecologist and paediatrician. In general, the paediatrician is responsible for 1000–2000 children and for health education in schools. Forthcoming changes in the health system should give families the freedom to select their own paediatrician. Social nurses are likely to retain their role.

District general practitioners typically have responsibility for 2000–3000 people and tend to work in small teams or in health centres whose staff also includes specialists. The trend is towards using more family physicians in these centres.

Current CINDI programme priorities for prevention in adults are the reduction of overweight, screening for high blood pressure, and the care of diabetes, cancer, allergies and asthma.

Iceland

About 150 general practitioners provide primary care for population of 250 000 in Iceland through 125 health centres. Legislation enacted in 1973 gave these centres the responsibility for disease prevention and health promotion activities outside hospitals. Current priorities are: mother and well-baby care, school health, screening for cervical and breast cancer, case finding for a variety of risk factors and chronic conditions, health education in general, programmes for better nutrition, accident prevention and antismoking, health promotion for the elderly and courses in behavioural change. Securing resources for research and the evaluation of the centres is a challenge.

The College of Family Physicians is active in promoting disease prevention and health promotion through general practice. A chair of family medicine has been created in the Faculty of Medicine in the University of Iceland.

Israel

A study of the non-pharmacological control of hypertension in Israel showed the potential for family physicians to participate in primary care research and to promote the control of prevalent conditions through the adoption of healthy lifestyles. The study – with 51 patients drawn from 5 general practices – compared outcomes obtained with a doctor-nurse team and a paramedical team. The follow-up after one and two years showed the value of counselling on nutrition and lifestyle and reduced drug utilization. Thus, the study showed the cost-effectiveness of the non-pharmacological approach. Key factors in the success of this approach seemed to be: the motivation of the health care team, specifically instructing the team on the approach, the team's use of individual counselling to suit patient preferences about daily activities, the role of the nurse as a main partner, and continuous follow-up to help patients maintain their new habits.

Malta

Two recent developments have strengthened the role of the general practitioner in Malta and are likely to influence the success of CINDI: the family doctor scheme and the founding of the College of Family Doctors. General practitioners have traditionally provided primary care and continuity of care. In 1979 the first health centres were created to offer a full range of primary care services, including free general practitioner service. In the late 1980s it became clear that the lack of registration of patients seen by such physicians led to lack of continuity of care. Further, an evaluation of the patient loads revealed that dealing with trivial conditions and administrative work comprised too much of the work of the health services.

The founding of the Malta College of Family Doctors in 1989 was the culmination of a movement to establish family medicine or general practice as a specialty in its own right. About half of all general practitioners have joined the College, which offers a formal programme of continuing professional development. Members of the College would spearhead the development of standard guidelines and protocols for general practice.

A family doctor scheme would begin in 1992 to combine the best elements of the work of general practitioners in solo private practice and in health centres. Family doctors would be linked to a Family Doctor Practice Council, an autonomous body financed by the Government. People could register with the physician of their choice, who would be paid on a capitation basis. Financial incentives would be introduced to encourage good practice (including disease prevention and health promotion) and periodic, confidential (anonymous) reporting of epidemiologically useful information.

Portugal

The CINDI programme in Portugal is pioneering new models of practice for general practitioners. There is a gradual recognition that primary care physicians (and other health workers) should concern themselves with all aspects of their patients' wellbeing. Patient education is aimed at promoting good health and avoiding the aggravation of disease.

In recent years, general practitioners have progressively involved themselves in community activities that encourage the population to accept responsibility for their health and to adopt healthier lifestyles. Group approaches are still in their infancy, however, and have not been fully accepted by the medical profession.

The CINDI programme has created education groups in areas such as Grandola and Stuba to help general practitioners to learn more about their communities, to encourage their involvement in community organizations (such as youth clubs) and to "open the doors" of health centres to the community. The fostering of cooperation between organizations of general practitioners and government would greatly facilitate the realization of general practitioners' potential in primary care.

USSR

Epidemiological studies in the USSR have documented the high prevalence of cardiovascular risk factors among children and adolescents; 5–10% have elevated blood pressure or are overweight. The

dietary component of the surveys has shown that adolescents derive about as much energy from fat (and saturated fat) as adults.

The CINDI programme emphasizes the importance of primary prevention in children and adolescents, through paediatrician general practitioners and programmes conducted in schools by specially trained teachers. Health education programmes address: smoking and alcohol, the prevention of dental disease and the implementation of recommendations to lower fat intake and to increase physical activity. A follow-up survey is planned to evaluate the effectiveness of these programmes.

Children and adolescents receive priority because intervention early in life is more likely to be effective. It may be directed to families, focus on the promotion of healthy lifestyles and strengthen the capacity of children and adolescents to overcome negative environmental influences.

As to adults, six workplaces in the USSR have participated in a health promotion and disease prevention programme, under the auspices of CINDI, since 1985. Technical support is provided by the Department of Prevention on Noncommunicable Diseases in Working Collectives of the All-Union Research Centre for Preventive Medicine.

At a workplace near Moscow, the programme serves 12 000 employees, half of them women. Coordinating and working groups implement the programme under the supervision of medical staff and management representatives of the enterprise. The programme banks on the working collective's capacity for self-organization, self-management and self-financing.

The CINDI programme and the Centre for Preventive Medicine coordinate and standardize the intervention methodology. Both the population and the high-risk approaches are used. The large numbers of people at high risk made advisable the use of nursing personnel to provide screening (free of charge) and counselling and to register people with hypertension. Physicians manage people with ischaemic heart disease, hypertension with complications or multiple risk factors.

The Centre for Preventive Medicine works with the health personnel at the workplace to organize screening and monitor the programme staff's adherence to the intervention protocols. The Centre also

supplies necessary drugs for treatment and checks on referrals to ensure that appropriate links are made to physicians' care. The organizational arrangements appear to account for the improved rates of hypertension control observed at the workplace near Moscow.

United Kingdom

A new contract between general practitioners and the Government in Great Britain in 1990 is creating a new infrastructure for a new approach for prevention and delivery of primary care. The contract stipulates a variety of health screening for groups such as the elderly, adults, children and women. Many general practitioners have responded to the contract by setting up health promotion clinics, to carry out such screening; more health care teams are being formed to attract patients. Such a team includes a physician, health promotion nurses and health visitors or district nurses.

General practitioners, partly financed by government, use modern technologies to collect and manage data. These data will allow audits to answer questions such as: which segments of the population are attending the health checks and whether the advice given to people at risk is effective.

As general practitioners become more involved in prevention, their main challenge will be to develop working relationships outside the health sector and to take part in new intersectoral approaches to health promotion.

Yugoslavia

The CINDI programme was adopted in Yugoslavia in 1984 and has been launched in four pilot areas: Novi Sad, Belgrade, Sarajevo and Ljubljana. The programme sponsors discussions of training and guidelines on clinical practice, disease prevention, health education, the detection and reduction of risk factors and the early diagnosis of disease. General practitioners in the CINDI programme take part in registering certain noncommunicable conditions (such as cancer and myocardial infarction) and maintain their own registers of patients' risk factor profiles.

General practitioners increasingly support health education activities in schools and workplaces and intersectoral work with community organizations. Some general practitioners take part in epidemiological and evaluative research in collaboration with the WHO CINDI and monitoring trends in cardiovascular diseases (MONICA) programmes.

Special Issues in the Prevention and Control of Noncommunicable Disease in Primary Care

Management by objectives of cardiovascular diseases

The main objective of a programme being developed in Stuba, Portugal is to increase the competence of health personnel in health promotion and the prevention of cardiovascular diseases. Six physicians manage the programme. The key premise is that people learn by doing. Accordingly, the intent is eventually to enrol a large number of physicians in an organized intervention that would approximate actual conditions of practice.

A survey of risk factors conducted in Stuba, according to the CINDI protocol, forms the basis for epidemiological diagnosis at the community level. The intervention protocol is detailed and concise. The intention is to detect and manage high-risk patients, develop consensus protocols and guidelines for clinical practice, and provide continuing medical education. Quantitative objectives have been set; it is expected that, after the first year of the project's operation, 75% of hypertensive people will be detected, 65% treated and about 30% controlled.

The first priority is the detection of people at high risk. Criteria have been set to define high risk, according to smoking status, blood pressure level, and the presence of hypercholesterolaemia, diabetes and obesity. People will be referred to other levels of care by participating health clinics; random selection will be used as appropriate. The main strategies to be used are teamwork, on-the-job training, obtaining consensus on treatment protocols and guidelines, health

education targeted to individuals and families, the use of a global risk factor perspective (which includes targeting the mass of people at moderate risk) and emphasis on non-pharmacological treatment measures.

The project has established collaborative links with health centres, local hospitals, the Heart Foundation of Portugal and with the "Smoking or Health" movement. The key project resources are educational materials for the public and health personnel (including physicians, nurses and dietitians from participating institutions). Process and outcome evaluations are planned.

Needs for integrated cancer prevention and control

One third of European countries have cancer control initiatives. Most European countries have organized programmes for individuals, schoolchildren and families, with different education components. Countries are learning that progress comes slowly. Preventive and control interventions have effects across the board and take years to appear.

General practitioners have a key role to play as members of interdisciplinary health care teams. These are increasingly seen as the best way to provide people with the spectrum of health promotion, disease prevention and treatment services needed to take integrated action to prevent and control cancer.

Primary care physicians have a role in all stages of cancer prevention and control. A primary health care team should give education, counselling and care and conduct research on patient exposure, for example. Increasingly, the public expects health care personnel to behave as role models.

Through health education and counselling, the health care team should encourage positive health behaviour and discourage harmful behaviour, motivate people to change their behaviour, build up public awareness and give counselling to the members of patients' families. In early detection and screening, the primary care team can monitor and educate patients on warning signs and symptoms of cancer, detect and refer asymptomatic cases and provide instruction in breast self-examination. The role of the team in an organized screening programme can include the invitation and recall of patients, taking cervical smears

and referring people for mammography. Further, the team can make important contributions to science by taking risk-oriented histories and striving for an understanding of the social roots of health-damaging behaviour.

To enable health personnel to form and work in teams to prevent and control cancer, a first priority appears to be giving the personnel the appropriate knowledge and skills. Professional education programmes should include the promotion of positive attitudes towards prevention. Health professionals at large need to be targeted.

Financial incentives and remuneration for preventive practice are a key component. The United Kingdom's 1990 contract for general practitioners is an example of a policy to build incentives for prevention into primary care structures. The best ways of organizing preventive work, including the type of professional education that might be most effective and the facilities and assistance to be expected from government, depend on the structure of the health care system in each country.

Country health authorities should provide the necessary structures, training facilities and incentives. Medical and voluntary associations are natural partners for general practitioners. International organizations such as WHO can support country efforts by developing relevant training materials, disseminating models of good practice and giving clear messages to the practitioners and the public in areas such as nutrition and cancer.

Practical aspects of diabetes control

The health care system in Croatia, like those elsewhere, has faced a sizeable increase in the prevalence of reported diabetes in recent decades. The likely causes are an increase in life expectancy, the aging of the population, and an increase in the prevalence of risk factors for diabetes and in screening by health services. General practitioners should see the detection of diabetes as an integral part of care.

The following are groups at high-risk of diabetes: family members of a diabetic patient, people aged 40 years and over, obese people, women who have given birth to babies weighing more than 4.5 kg, people in high-risk workplaces, people with impaired lipid

metabolism, some endocrinological disorder (such as Cushing's syndrome, hyperthyroidism) or gastrointestinal diseases (such as chronic liver disease and chronic pancreas inflammation).

Some measures are recommended for the control of diabetes and its complications. Every three months, the physician should monitor the patient's body weight; determine the levels of triglycerides, total serum cholesterol and blood pressure, blood glucose, glycated haemoglobin (if possible), and urine glucose and protein; and examine the feet if the patient has peripheral vascular disease or neuropathy. A complete physical examination should be made every year, including biochemical tests and special examinations to check for or monitor diabetic complications. The latter means an examination of the fundus of the eye, a target neurological examination, an electrocardiogram and an examination of peripheral circulation.

Maintaining health in elderly people

The aging of the population requires new approaches to prevent premature needs for care. The conventional approach has been the provision of direct assistance, with the elderly playing a passive role. The new approach must be "helping by being demanding". General practitioners can help elderly people to maintain their independence by maximizing their physical and mental abilities.

People maintain their self-esteem through the sense of usefulness that comes from work. Rehabilitation measures reduce the number of individuals in need of care. In addition to increasing flexibility and fitness, and helping to prevent accidents, physical exercise helps to maintain metal wellbeing, as does an active social life.

General practitioners need to recognize that maintaining health in old age is a task that people should start early in life. Patients should adopt hobbies and healthy lifestyles long before retirement. General practitioners can help to create opportunities for the elderly to remain active in their community.

Appropriate technology for general practice

General practitioners are often seen as conservative in adopting new technology. Some explanations offered are: the conflict between

technology and the personal contact that is the hallmark of general practice, cost, lack of time and poor acceptance by some patients. As new technologies become more user-friendly and accessible, however, general practitioners should not only be consumers of technology but set the agenda for its use, becoming "placers of orders", so to speak. In most instances, the issue is not just to use what is available but to make technology appropriate to actual needs.

New technology may be advantageously applied to areas as diverse as home treatment, health promotion and office procedures. The experience of the Zagreb WHO collaborating centre for primary care is most relevant to CINDI; there technology was used to improve communication, the exchange of experience and the provision of direct access to new scientific and technical information.

An interactive system using videotapes and computers was developed to support continuing medical education in Croatia. The Zagreb project involved experts from university faculties and institutes, 240 primary care units, 60 health centres and 13 regional units. The system aimed to sustain, not to replace, existing professional meetings and other forms of continuing medical education. A quarterly video journal was distributed for three years. The system was not inexpensive, but self-supporting. It triggered new professional education activities in previously "dormant" areas.

Experience shows the importance of new technology as a facilitating factor in learning. Educational theory and human relations should dominate the process. Experience in other areas suggests that the main reason for poor practice is not simply the lack of formal knowledge. The question in designing computer learning systems is whether the system helps to expand the existing experience of learners or only adds new data to existing knowledge. The latter would be of limited value or even harmful if new data and concepts counter an individual's structure and experience.

CINDI countries have opportunities to exploit new technology to facilitate the exchange of information and experience. The new approaches would supplement existing channels such as the *CINDI connection* newsletter. Effectively introducing new information technology requires careful planning and organization, and the pooling of resources and concrete ideas on the target audience and content. This

would mean exchanging experience with major programmes, and regularly communicating, solving problems and expanding partnerships for research.

The advent of information technology permits the privilege of timely access to scientific information and national and international experience to be extended beyond government and academic centres of excellence. Helping general practitioners to become mainstream users of such technology is a worthy challenge.

Recommendations

1. To promote the development and use of health promotion and disease prevention measures, general practitioners should be encouraged:

(a) to motivate community groups to create and pursue measures to enhance health promotion and disease prevention;

(b) to support partnerships between community groups and professional associations to implement health promotion and disease prevention programmes, and to encourage the public to take advantage of these programmes;

(c) to identify regional gaps in the programmes available to the public and work to fill these gaps by developing programmes that are effective and acceptable to their target groups;

(d) to raise the public profile of groups responsible for successful models of health promotion and disease prevention;

(e) to share expertise with other primary health care workers responsible for the same population and with them to plan and carry out disease prevention and health promotion activities;

(f) to ensure that the benefits of health promotion and disease prevention reach all groups in society, particularly the disadvantaged; and

(g) to become role models in the areas of positive lifestyle that they promote.

2. General practitioners should be encouraged and supported to develop appropriate infrastructures to enhance the practice of health

promotion and disease prevention in general practice. This task would include:

(a) the strengthening or establishment of departments of family medicine in medical schools and professional associations;

(b) the extension of the knowledge and skills of physicians in prevention and health promotion through the establishment of appropriate curricula for undergraduate, postgraduate and continuing medical education;

(c) the development and implementation of up-to-date guidelines – for the identification of people at risk and for the management of preventable conditions – for use in general practice; and

(d) the development of information systems to enable general practitioners to monitor the risk profiles of their patients and to evaluate the effectiveness of the preventive measures they use.

3. The evaluation of remuneration systems and other appropriate incentives should be promoted to encourage health promotion and disease prevention in general practice.

4. The WHO CINDI programme should work with professional associations, government departments, industry and research funding bodies to develop, evaluate and disseminate the results of innovative multidisciplinary models for the delivery of health promotion and disease prevention services.

5. General practitioners should be encouraged to become full partners in research on issues in the prevention of noncommunicable disease through primary health care.

6. The CINDI programme should collaborate with major national and international organizations, professional associations and industry – when appropriate – on the exchange of information and technical and human resources, and in the development of regional, national and international partnerships to further primary care research and the implementation and evaluation of disease prevention and health promotion programmes. This should be pursued by continuing and further developing the ongoing primary care initiatives in CINDI countries.

7. Core data sets should be developed at the regional, national and international levels to support disease prevention and health promotion in general practice and the assessment of quality of care, with due regard to maintaining patient confidentiality.

8. Local health information systems consistent with core data sets should be used to support the practice of disease prevention and health promotion.

9. Mechanisms should be established and promoted to facilitate the exchange of:

- scientific information on the effectiveness of health promotion and disease prevention in general practice;
- protocols for the implementation and evaluation of health promotion and disease prevention programmes;
- information systems, including software in the public domain, for general practice.

10. Professional associations, government departments and industry should recognize the importance of primary care research carried out by general practitioners.

Annex 1

BACKGROUND DOCUMENTS[a]

Background document for the meeting, by E. Nüssel & Z. Jaksic.

Changes in the functioning of general practitioners in Europe, by W. Hubrich.

Conception of future clinical medicine of general practitioners, by E. Nüssel et al.

General practice-based prevention: primary care team's role, by L. Döbrössy.

Review of technologies appropriate to general practice in promotion, prevention, cure and rehabilitation, by Z. Jaksic.

[a] Copies may be obtained from the CINDI unit, WHO Regional Office for Europe, Scherfigsvej 8, DK 2100 Copenhagen Ø, Denmark.

Annex 2

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