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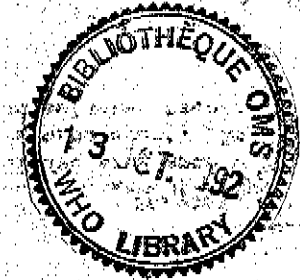
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## **HYPERTENSION CONTROL AND ITS PRIORITIES IN THE CINDI PROGRAMME**

Report on a WHO Consultation

Copenhagen  
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EUR/HFA TARGET 4

This activity was organized by the WHO Regional Office for Europe to promote work aimed at achieving the following target in the health for all strategy.<sup>a</sup>

## **TARGET 4**

### **REDUCING CHRONIC DISEASE**

*By the year 2000, there should be a sustained and continuing reduction in morbidity and disability due to chronic disease in the Region*

#### **Keywords**

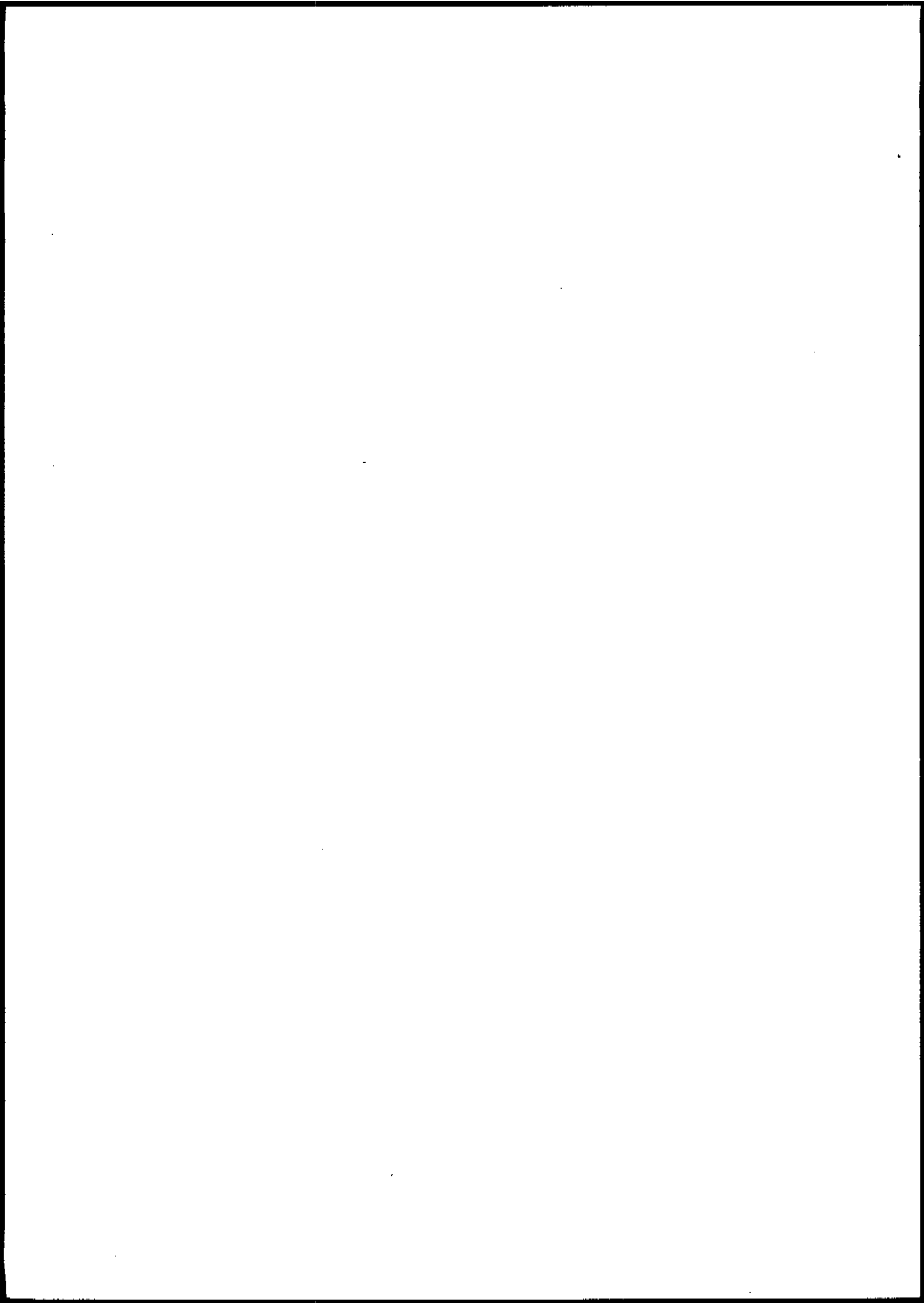
**HYPERTENSION – prevent/control**  
**NONCOMMUNICABLE DISEASE CONTROL**  
**EUROPE**  
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<sup>a</sup> *Updating of the European HFA targets. Copenhagen, WHO Regional Office Europe, 1991 (document EUR/RC41/Inf.Doc./1 Rev.1).*

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## 1. Introduction

The purpose of the consultation was

- to discuss how to carry out an assessment of the high blood pressure control activity within the CINDI countries (at programme, community and individual level);
- to initiate discussion on the major components of an action plan which would enhance hypertension control in CINDI as well as non-CINDI countries.

Dr Mark Tsechkovski, Director of the Disease Prevention and Quality Control department, opened the meeting and welcomed all the participants. He reviewed the importance of high blood pressure control within the context of the CINDI programme. There have been decreasing trends in cardiovascular disease in North America and Western Europe with better control of high blood pressure, but there are significant gaps between the East and West in Europe. The CINDI programme is ideally suited to attempt to reduce some of these gaps through programmes such as high blood pressure control. Dr Tsechkovski pointed out that high blood pressure is likely to be even a greater problem in the future due to the aging population. For example, it is estimated that in Europe 20% of the population will be 65 years or older by the year 2000. This changing demographic picture is likely to have a significant impact on the prevalence of chronic disease, further emphasizing the need to develop good chronic disease control programmes.

Dr A. Shatchkute, Regional Adviser for Chronic Diseases, said that high blood pressure control has always been an important focus for the CINDI programme. This is reflected in the conclusions and recommendations of several CINDI meetings: the annual meeting of the Programme Directors in Bulgaria in 1987; the meeting of "The Role of the General Practitioner in the CINDI programme" in Germany in 1991; and the recent CINDI Session during the Fourth International Symposium on Hypertension Control in the Community in Israel, 1992.

At their annual meeting in Canada in May of 1992, the CINDI Programme Directors agreed that it would be quite timely to assess the progress achieved in the area of high blood pressure control and how improvement could be obtained, particularly through strategies such as enhancement of the preventive practice of general practitioners, public education and patient education.

## 2. Hypertension control at national level

2.1 Dr Claude Lenfant, Director of the National Heart, Lung and Blood Institute in the USA, presented the United States National High Blood Pressure Education Programme.

This programme (NHBPEP) is now 20 years old; being established in 1972 and is a cooperative effort between the National Heart, Lung and Blood Institute and a number of professional and voluntary health agencies. The purpose of the programme is to reduce death and disability related to high blood pressure through programmes of professional, patient and public education. Strategies to achieve this goal include grounding the educational programmes to a science base; developing and disseminating education programmes and materials, providing technical support to national, regional, state and community health programmes.

Dr Lenfant stated that in their view the programme had been very successful. Blood pressure is under much better control in the United States now than in any point in its past. There has been significant decline in the stroke and ischemic heart disease rates. The major success of the programme was in the control of high blood pressure and not in its prevention. It is this latter aspect of blood pressure control, which will likely be the focus of the next stage of the programme; a focus which he felt is now justified based on the data available. The strategy for this new stage should be available in November 1992.

Dr Lenfant indicated that although the programme began as a government initiative, its success was due to a comprehensive strategy to mobilize, educate and coordinate resources of groups interested in high blood pressure control. It used a consensus building process to identify major issues of concern and to develop programme strategies. Without this collaborative and cooperative approach it would not have worked. Dr Lenfant stressed that this programme is very dynamic. It is able to change and to incorporate new information, particularly that coming from research, for example, in the area of new drugs.

2.2 Dr Sylvie Stachenko, Director of Preventive Health Services at Health and Welfare Canada, reviewed the status of high blood pressure control in Canada and discussed hypertension control policy in the CINDI programme.

Since 1972, there has been a significant decline in the prevalence of uncontrolled high blood pressure in Canada. Coincident with this fact, there has also been a sharp reduction in the stroke rate and rates of ischemic heart disease. Canada now has one of the lowest mortality rates from stroke among industrialized countries.

Despite the improvement in hypertension control, recent data from provincial heart health surveys in Canada demonstrate that a significant number of Canadians were unaware they have high blood pressure and of those who were aware, a significant proportion did not have controlled blood pressure. High blood pressure control was lowest among young males. The survey data suggested also that the use of non-pharmacological management with or without drugs was far from optimal.

The above data suggested two areas to improve high blood pressure control: the enhancement of the identification of individuals with high blood pressure and effective management and linkage to the pharmacare system when indicated.

Dr Stachenko indicated that partnerships and coalitions, like in the United States, have been a major feature of high blood pressure control in Canada over the last 20 years. The Canadian Coalition on High Blood Pressure Control (a multidisciplinary, intersectoral steering group) started in 1985. It has focused on some components of blood pressure control e.g. professional education, public education, and has produced a number of recommendations from consensus conferences, particularly on non-pharmacological management of high blood pressure.

In 1992 the Canadian Hypertension Society updated recommendations for the pharmacological management of high blood pressure. The approaches to be used for high blood pressure control in the elderly and diabetics were highlighted. The Canadian Heart Health Initiative has an important focus on professional education within the context of a general strategy of cardiovascular disease prevention and control within Canada. The major focus for professional education include counselling skill and office support systems to facilitate the activities of physicians for the control of high blood pressure in their patients.

Dr Stachenko concluded by suggesting that the CINDI programme provided a unique opportunity for collaboration between countries in a number of important areas. CINDI participants have a fair field to collaborate on various patient and professional education modules and on the development of better local information systems for the primary care sector, particularly outcome and process indicators. CINDI also provides opportunities for future cost-effectiveness studies on pharmacological as well as non-pharmacological management of high blood pressure and the development of stroke registries and record linkage technologies which would be valuable to monitor preventive programmes.

2.3 The meeting was then addressed by Professor F. De Padua from Portugal, concerning patient and public education on high blood pressure control at national level.

Dr De Padua reviewed the situation on cardiovascular disease in Portugal since 1972 and pointed out that stroke is the number one killer as opposed to ischemic heart disease as is in many other industrialized nations. The programme activities in Portugal over the past 20 years have resulted in a steady decline in the mortality from stroke with significant improvement in the rates of blood pressure control. These programme activities, to which Dr De Padua has added significant leadership, have focused primarily on a multifactorial mass media campaign. The campaign stressed blood pressure measurement at the same time providing advice on stopping smoking, reducing obesity, proper diet, and exercise habits. Using this approach, the programme continually and regularly emphasized the need for individuals to have their blood pressure measured and explained the link between blood pressure and health.

In Portugal, the mass media is the principal vehicle to deliver public and patient education messages. These consisted of television programmes with health professionals explaining the significance of high blood pressure control. There are cooking lessons by well-known chefs on television outlining more healthy food, particularly aimed at having individuals use less salt.

Apart from mass media activities, the programme also includes mobile clinics which are used throughout the country to check individual blood pressure and raise awareness to the issue. During these clinic visits, individuals are shown how to measure their own blood pressure and are encouraged to do so. In recent times, churches have been added to the programme as areas where blood pressure can be measured and awareness to the issue raised.

The Portuguese experience has clearly demonstrated the need for strong and visible leadership at a national level, particularly in those countries where no coordinated programme existed. In Portugal, the programme began as an alliance between a few professionals and a voluntary organization (i.e. the Heart Foundation). In the beginning, there was limited government funding and not much professional support, particularly from physicians. The private sector was useful in providing funds.

### 3. Discussion on hypertension control at national level

Discussion occurred on the value of producing how-to manuals on various aspects of high blood pressure control for distribution within the CINDI programme. There is a lot which could be learned from the experience of others. There was a view that public education was both a science and an art that had to take into account the local conditions in each individual country. Canada has used a social marketing approach to drug and tobacco use, but there has been no national strategy on blood pressure control in the media. The United States experience has used marketing in public service announcements, but the approach did not create a popular movement as was the case in Portugal.

Documenting how to mobilize support in communities and countries and lessons learned from some that have been successful could be useful, particularly in Central and Eastern Europe. The United States programme produces generic messages which then can be customized to individual organizations or communities. Likewise, they produce a mini "how-to" manuals for a variety of programme components (e.g. worksite programme, manual for nurses programme, etc.). In general, it was felt that CINDI could provide strategies on how to get started in a programme and then on how to build on the programme over time. This information could be documented and then transmitted to those countries which were interested.

### 4. Enhancement of preventive practices of general practitioners

4.1 Professor E. Nüssel, Director of the Institute of Clinical Social Medicine in Heidelberg, talked about the priorities enhancing the preventive practices of general practitioners in the field of hypertension and about the experience of the CINDI programme in Heidelberg in this area.

Over the past 20 years, things have changed quite considerably with respect to the involvement of general practitioners in patient and public education in Germany. Prior to this time, physicians were discouraged from participating in patients education. But now they are expected to participate in public educational activities and to form self-help and counselling groups within their own practices. The essence of the CINDI approach in Heidelberg is the integration of the programme within the existing system using existing resources. As a consequence, general practitioners can have strong leadership in the control of such conditions as high blood pressure on a broad scale. Physicians use group therapy in patients education. Within individual practices or through the combination of practices, therapy groups for heart disease, diabetes, hypertension, etc. are often formed.

Oftentimes the process is furthered by alliances with the pharmaceutical industry who provide financial support to these groups. To-date, government has not provided resources for this activity. Many insurance companies are willing to pay for these services of health professionals, particularly if the physicians have had training and are certified formally for this kind of activity.

Dr Nüssel suggested quality assurance programmes for group therapy as areas for further development. Additionally, he suggested that local information systems bringing together data from the practices of local physicians would be very helpful for these professionals to monitor how risk factors were being controlled.

Dr Nüssel stressed the importance of research. In his opinion resources were needed for general practitioners to help them to form research groups which then could collaborate and cooperate with universities and industry and thereby initiate a "bottom up" research process.

## 5. Assessment of hypertension control

5.1 Next the meeting was addressed by Dr MacLean from Canada, on the assessment of hypertension control at demonstration and national levels within the CINDI programme. First Dr MacLean reviewed the importance of considering hypertension control in CINDI within the context of a general programme for prevention and control of cardiovascular disease. He stressed the association of high blood pressure with obesity, diabetes, dislipidemia, physical inactivity and unhealthy diet.

One of the major indicators of high blood pressure control used by most countries at the national levels is the stroke mortality rate. This data is usually monitored over time and serves as a long-term indicator of high blood pressure control. Stroke mortality can often be augmented by incidence data in those areas where stroke registries exist (e.g. MONICA centres) or by the use of record technologies which are being developed in some countries (e.g. CANADA).

It is useful to monitor a variety of prevalence data, e.g. the prevalence of high blood pressure by age, sex and socioeconomic status. Monitoring over time produces trends and again can be useful in measuring the long-term outcomes of hypertension control programmes.

With the increasing interest in systolic hypertension in the elderly, the systolic blood pressure is felt to be important indicator in the future with the aging of the population.

Assessing the awareness and control of high blood pressure among patients, particularly by age, sex and socioeconomic status, are felt to be important indicators of high blood pressure control in any population/community programme. These indicators have been found very useful in Canada. For example, despite improvements in mortality from stroke and in the control of high blood pressure, the health surveys demonstrate that a significant number of individuals, particularly young males, have uncontrolled high blood pressure and are unaware of their condition.

Other useful indicators for monitoring high blood pressure control is the analysis of treatment: the use of pharmacological and non-pharmacological measures, compliance with treatment regimes, etc. This information can also provide useful programme targets to improve the control of high blood pressure in identified subjects.

Public and patient knowledge could be important indicators. The assessment of the frequency of blood pressure measurement, the patients' awareness of the actual blood pressure values and their significance plus knowledge of key non-pharmacological measures such as weight reduction, salt restriction and alcohol reduction can be important measures for evaluating public and professional education. This evaluation can also serve as an indirect measure of the patient education practices of health professionals, particularly physicians.

Whatever indicators are used in the assessment of hypertension control, it is important that the process trends are monitored over time in a consistent manner. This could be accomplished by utilizing periodic population health surveys, monitoring hypertension patients at health clinics or by monitoring hypertensives in physicians' practices through local information systems. In any event, such monitoring should use standardized protocol by personnel who have appropriate training. In this way comparisons could be made over time within anyone population group or between population groups in different countries.

6. Discussion on how to improve hypertension control within the CINDI network

There was general agreement that the data collection of indicators presented above would be very useful. However, it was recognized that surveys are expensive and that particularly population surveys may be beyond the scope of some countries. Many less costly alternatives may prove to be useful in some instances, e.g. having professionals monitoring their practices i.e. in the assessment of the control of registered hypertensives. The control and awareness data was felt to be most useful indicators. However, how this data would be collected, would of necessity have to be left up to individual countries. There was an acknowledgement that all CINDI countries do collect hypertension prevalence data which has been published by the data management centre in Heidelberg. A significant number of CINDI countries have submitted more data to Heidelberg and that the further analysis of this data may be very useful.

There was general discussion and agreement that there was a need for quality control and evaluation of the outcomes of physician services with respect to high blood pressure control. Local information systems would be very useful for this purpose. It was generally agreed that a lot of physicians are sceptical as to their capacity and skill to change patient behaviours. Local information systems could provide feedback to the physicians to keep them motivated and build confidence in their ability to control risk factors.

Funding for physicians preventive activities was viewed as a major problem in most countries. Although there was no ready solution for this problem, it was recognized that more and more funding agencies are recognizing that preventive activities, particularly on behalf of physicians, should be reimbursed. The German approach of having private insurance to pay accredited physicians for prevention is a useful model and could be used by other countries with similarly funded health care systems. It was viewed as important for health professionals to work in close contact with politicians and other community leaders to try and generate support from government for cardiovascular disease prevention programmes. Local information systems were again viewed as important for this aspect of physician activities in that it would allow to present very locally relevant risk factor levels of the population. This would in turn hopefully galvanize political support.

There was general agreement among the participants that the presented national high blood pressure education programme was a great success, principally due to the very pragmatic approach to reaching its goals. In addition to focusing on the control of high blood pressure, there was enough evidence to-date to justify preventive activities, particularly those directed at non-pharmacological approaches such as dietary advice regarding salt and alcohol restriction, as well as emphasis on weight control and physical activity.

Compliance with treatment for high blood pressure control was felt to be a major issue to be dealt with by any programme. This issue was felt to be more of a problem in lower socioeconomic groups and in young to middle-aged males. A number of strategies were discussed to deal with this issue. Public education can be effective as well as community involvement (particularly if it involves opinion leaders and community leaders). In the United States, use of well-known sports figures such as baseball players in public education programmes has been very successful. Targeting children with public education through competitions in schools, etc. has been found to be quite successful. Providing information and teaching children about high blood pressure and its control has the added benefit of having a positive impact on the parents and grandparents of these children who may have high blood pressure.

The American experience has demonstrated a very useful programme which may be suitable as model for other issues, e.g. cholesterol. Here it has been extremely important that the programme be controlled by the partners, not by the government. The partnership must include the health professional groups (particularly physicians) and all relevant organizations. Professional education was one of the first priorities of the programme to ensure that the group of physicians would be fully supportive.

## 7. Conclusions

7.1 The presented national hypertension programmes confirmed that all three strategies - professional education, patients education and public education - should be used and interlinked.

7.2 Problems of high blood pressure control vary from country to country and there is a significant gap between countries with the respect to high blood pressure control and the occurrence of hypertension complications.

7.3 This gap could be narrowed by collaboration between those CINDI countries where high blood pressure control programmes appear to be successful with those countries where blood pressure control could be improved.

## 8. Recommendations

8.1. The following are key points to develop successful high blood pressure control programmes:

- Hypertension control programmes work if the approach to the issue is through a process of coalition and network building among significant organizations and agencies in the community. Within such networks it is critical to get support from health professionals, particularly physicians.
- Success in the control of hypertension is more likely to occur if programme activities utilize the existing health care system and resources.
- To get the programmes going require a strong, visible and credible leadership.
- The use of role models to support high blood pressure control has been found to be very useful.
- In strengthening the preventive practices of health professionals, local information systems are important. They provide feedback and assist with quality control.

- Evaluation of programmes should be carried out as simple as possible to be useful. The most useful indicators are the awareness of the population of high blood pressure issues and hypertension control information.
- Programmes should be dynamic and incorporate new information coming from research.

8.2. The following assesment of the status of hypertension control within CINDI in 1992/1993 is recommended:

- The Data Management Centre at Heidelberg should be consulted on the nature and extent of the data available on high blood pressure control.
- At the same time, each CINDI country should be asked to provide information on the methodology and type of data on hypertension control which they are using.
- At the next Programme Directors meeting of CINDI, there should be a presentation on the hypertension control activities reported by the various countries.

8.3 It is recommended to hold the following workshops in 1992/1993:

- A workshop on coalition building. Its main features would be awareness of how coalitions have been formed in different countries and the techniques to carry this out.
- A second workshop would be on social marketing. Its main features would be the use of the media and how to market health.
- A third workshop would be on local information systems to monitor hypertension control.

8.4. To assist the CINDI programmes and in an attempt to prevent duplication of efforts, there is a need to gather examples of the educational programmes, particularly public education programmes, which have been used and found to be effective. These countries need not necessarily be CINDI countries, e.g. training materials from the USA experience would be quite valuable.

8.5 A collaborative project on patients education in CINDI demonstration areas is encouraged to launch if funds and time permit.



Consultation to Discuss Hypertension Control  
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