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ABSTRACT

This report presents the National Heart, Lung, and Blood Institute's (NHLBI) review of and response to the final report of the National Black Health Providers Task Force on High Blood Pressure Education and Control. The response includes a statement of NHLBI's involvement in health research, and descriptions of what steps can be taken to solve the problems which have been identified by the task force as causing high blood pressure. NHLBI responses are presented for the following topics: (1) provider roles: (2) community education and coordination: (3) biomedical research and epidemiological research: (4) delivery systems issues and research and policy recommendations: (5) nutrition: (6) health education: (7) behavioral studies related to hypertension: (8) manpower: (9) pediatric high blood pressure: (1) finance and (11) the role of assistants and nurse practitioners. An appendix summarizes the Institute's planning process. (Author/APM)

Review and Response to the Final Report of the National Black Health Providers Task Force on High Blood Pressure Education and Control

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health

REVIEW AND RESPONSE TO THE

FINAL REPORT OF THE

NATIONAL BLACK HEALTH PROVIDERS TASK FORCE

ON

HIGH BLOOD PRESSURE EDUCATION AND CONTROL

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health
National Heart, Lung, and Blood Institute

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FOREWORD

There are more than 500,000 cases of stroke in the United States each year, 170,000 of which result in death. The death rate from strokes among black Americans is estimated to be 66 percent higher than among whites. The principal cause of stroke is high blood pressure.

There are well over a million heart attacks each year, resulting in loss of life to more than 640,000 Americans. High blood pressure is a major cause of heart attack.

Sixty-million Americans have some form of high blood pressure requiring treatment or at least surveillance. Of those warranting treatment probably less than half have high blood pressure under control.

Black Americans have high blood pressure at one and one-half times the rate of white Americans.

The scope of the problem is overwhelming and tempered only by the dramatic progress which has been made in recent years. During the past 10 years, there has been a 24 percent decline in the age corrected rate of heart attack deaths and a 38 percent decline in the age corrected rate of stroke deaths. The exact reasons for this reduction in cardiovascular mortality are not fully understood, but the consensus among medical scientists is that the expanding national effort to bring high blood pressure under control, and of the National High Blood Pressure Education Program in particular, has had a major favorable impact.

However, there are no suggestions that we can afford to rest on our laurels, especially after looking at the degree of illness and the amount of premature deaths that still take place because of uncontrolled high blood pressure. And, if anyone feels that the comprehensive efforts now under way cannot be improved upon, one should examine the findings of the 5-year Hypertension Detection and Followup Program (HDFP) study completed last year. HDFP demonstrated that systematic treatment compared with typical or routine care in the community could reduce premature mortality among those with high blood pressure by an additional 17 percent. This figure is all the more striking when it is realized that significant advances have been made in community care in recent years.

Another key finding of HDFP was that black participants in the group receiving vigorous, systematic care registered a 22.4 percent decline in mortality over those blacks receiving routine care, whereas the difference among whites was 10 percent. This should put to rest any remaining notions that we cannot hope to achieve the same progress in controlling high blood pressure and its dreadful clinical sequelae among blacks as we can among whites.

A major lesson of the HDFP study is that, despite dramatic progress made to date in high blood pressure control, we can achieve even greater progress in reducing hypertension-related illness and death, particularly in the black community. How to improve our efforts in this regard is the major question and was the concern behind the charge I gave to the National black Health Providers Task Force on High Blood Pressure Education and Control in October 1977.

The task force sought to obtain consensus on the role of black health care providers in the detection, management and treatment of hypertensive patients. It set out to: Identify high-risk segments of blacks not being reached by current high blood pressure control efforts; list current activities of black health care providers in high blood pressure control; determine the amount and type of feasible interaction or cooperation among black health care providers in this area; and identify barriers to interaction or cooperation. It analyzed provider roles; delivery systems issues; biomedical research and epidemiological issues; community education and coordination; health education; financial issues; nutrition; pediatrics; behavioral research issues; the involvement of nurse practitioners and physician assistants; manpower needs; legal considerations; and legislative issues.

The effort has been a massive one involving tremendous time and talent on the part of many interested and concerned citizens. The result has been equally impressive; a major task force report with scores of recommendations dealing with a wide range of crucial issues. The report itself is being published separately by the Institute and will have wide-scale distribution. Its impact will be far-reaching and long lasting. Those who contributed to this work should take justifiable pride in what will be considered an important public health effort.

What we will attempt to do in this particular document is to take each recommendation individually and indicate what steps can be taken. Some of the recommendations lend themselves to new initiatives. Some reinforce steps already being taken by the National High Blood Pressure Education Program. Some will provoke a sensitivity that, perhaps, has been lacking in the past. All the recommendations will be given widescale distribution to appropriate health organizations and professionals as well as concerned citizens. Together, these recommendations will lead to new commitment, new cooperation and new coordination. Ultimately, they will be a contributing factor towards further reduction of disease and premature death for all citizens and particularly for black Americans.

The task force recommendations already have impacted upon the plans and programs of the National Heart, Lung, and Blood Institute and I have no doubt that they will soon have similar influence with the many other public agencies and private organizations now active, and soon to be active, in the national effort to bring high blood pressure under control.

It is with deep appreciation that I thank all the members of and the contributors to the National Black Health Providers Task Force on High Blood Pressure Education and Control. Theirs was a job well done.

Robert I. Levy, M.D.
Director
National Heart, Lung, and Blood Institute

I. INTRODUCTION

The Black Health Providers Task Force was initiated to provide expert advice to the National Heart, Lung, and Blood Institute and its National High Blood Pressure Education Program. In October 1977, the task force was charged with examining issues and making recommendations about the roles of black health care providers in high blood pressure control efforts, about reaching segments of the black population who may be at high risk for high blood pressure but are not being reached by current programs, about the current activities of black health care providers in high blood pressure control, and about overcoming possible barriers to enhanced interaction and cooperation between the black providers and high blood pressure control programs.

In carrying out this charge, the task force carefully developed a plan for investigation and analyzed information in a variety of areas related to its charge. The task force assessed current programs and health problems; examined black health provider efforts along with those of the Federal Government and voluntary agencies; studied feasible interactions and relevant barriers; and developed proposals for improvements. These proposals were widely reviewed and the task force final report, issued in the spring of 1980, presents numerous recommendations to the NHLBI, and the health community in general.

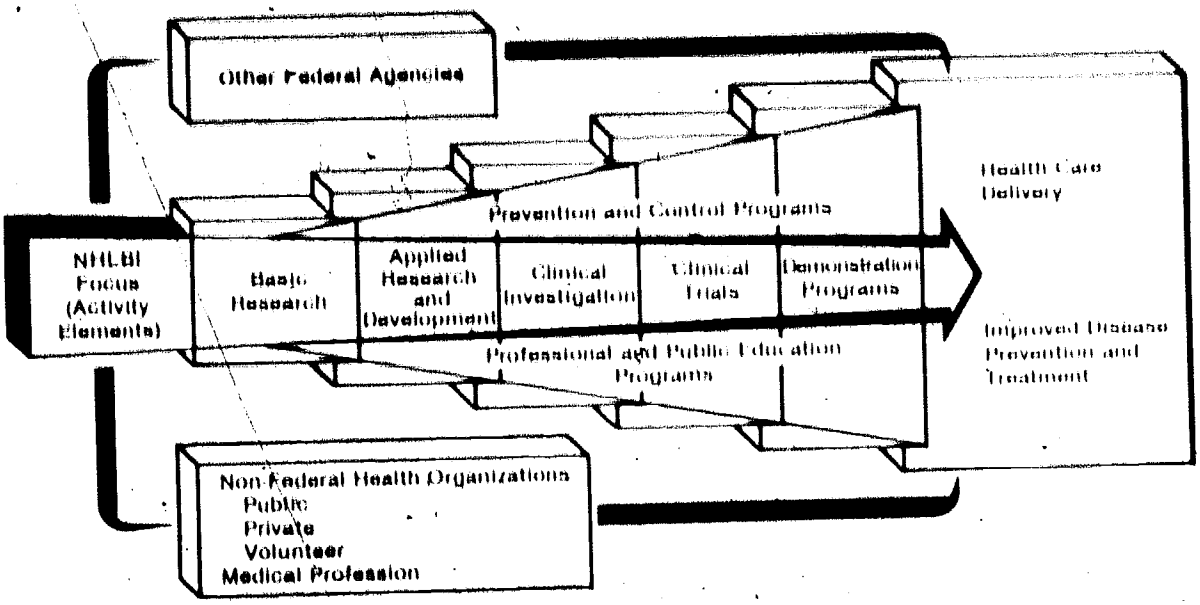
The task force recommendations were intended to be used not only by NHLBI and other parts of the Government, but also by health care providers themselves, representatives of large-scale delivery systems, financing organizations, and various community organizations. They were to serve as recommendations both to organizations and individuals.

This report presents the NHLBI's review and response to the task force recommendations. The response includes a statement of NHLBI's involvement in the spectrum of health research, a brief description of the approach used by the Institute in developing its response to the recommendations, the Institute's response to each of the recommendations of the task force, and an appendix, which summarizes the Institute's planning process.

II. NHLBI's INVOLVEMENT IN THE SPECTRUM OF HEALTH RESEARCH

NHLBI's efforts in high blood pressure control parallel those in other health areas for which the Institute has responsibility. These span a spectrum of activities beginning with basic biomedical research and culminating in improved methods of prevention, treatment, and control.

Figure 1. The Health Research Spectrum



As can be seen in figure 1, there are five major segments in the process of improving health care with which NHLBI is most heavily involved.

These segments are basic biomedical research, applied research, clinical investigation, clinical trials, and demonstration programs. In addition to these segments, the Institute is involved in education and demonstration efforts and prevention, education, and control programs. In essence, NHLBI seeks to discover basic biomedical facts about life processes at the cellular and molecular levels, as well as the clinical level; gain insight into fundamental disease processes and into their prevention and treatment; apply this knowledge to the development of methods for the prevention and treatment of disease; test and validate promising methods; and catalize the introduction of validated methods into medical practice and into the health care practices of the general public. All of NHLBI's mandated responsibilities are directly related to this spectrum of activities and it is within this framework that NHLBI programs and new initiatives are planned.

The Institute actively cooperates and collaborates with other Federal and non-Federal organizations in the conduct of its programs in all segments of the health research spectrum. Indeed, in many instances, the NHLBI depends on some of these organizations for the successful implementation of some of its programs.

The bulk of activities supported by the Institute are activities initiated by the scientific community which are competitively reviewed, and have been awarded according to their scientific merit. A significant fraction of the Institute activities derives in response to solicitations and announcements of interest on the part of the Institute. Major initiatives undertaken by the Institute are subjected to the review of standing advisory committees before being adopted as formal projects and/or programs. The mechanism whereby topics are selected for such Institute initiatives is discussed in the appendix.

III. NHLBI'S APPROACH IN RESPONDING TO THE RECOMMENDATIONS OF THE NATIONAL BLACK HEALTH PROVIDERS TASK FORCE

In response to the recommendations of the Black Health Care Providers Task Force, NHLBI staff has carefully reviewed the recommendations in the light of the Institute's ongoing programs and its legal mandates. The recommendations have also been viewed within the context of the spectrum of NHLBI activities. In order to incorporate the recommendations into its planning process, NHLBI has compared each recommendation to its programs in each segment of the spectrum. Furthermore, existing programs and legal mandates have been assessed in light of the recommendations; where current programs do not already adequately address the recommendation, NHLBI has identified specific actions it could take on the recommendation within its program structure and that of the overall National Heart, Blood Vessel, Lung, and Blood Diseases and Blood Resources Program. It must be understood that the national program includes the efforts of all Federal heart, lung, and blood programs, regardless of organizational location, and NHLBI has lead responsibility for planning and coordinating these programs throughout the Federal Government.

In its review, NHLBI has found the recommendations of the Black Health Care Providers Task Force to address activities in every segment of the health research spectrum from basic research to health care delivery. In comparing the recommendations to mandates and ongoing NHLBI programs in these areas, the Institute finds that the actions it could take to incorporate the recommendations into the national program fall into five major categories or kinds of action. These five categories of response are as follows:

- Some recommendations address areas within which NHLBI already has distinct responsibilities and for which the Institute has already recognized a need. Such recommendations are generally ones for which the need has been demonstrated to be strong, the feasibility of the Institute taking steps to address that need is considerable, and the beneficial impact is expected to be great. Examples of this kind of recommendation include the development of a health care providers' role manual and the establishment of four Minority High Blood Pressure Control Demonstration Centers. These recommendations will be given priority within the NHLBI planning process and the Institute will look closely at the availability of resources to implement such recommendations.

- In some instances, current NHLBI programs already carry out a significant level of activity appropriate to the recommendation. The Institute will continue to conduct or sponsor such activities in these instances.

- Some recommendations fall outside the implementation mandates of the NHLBI. While the Institute does not have the legal authority to implement such recommendations within its own programs, they are still relevant to the Institute's lead role in planning the national program. NHLBI is responsible for providing leadership in planning heart, lung, and blood activities through cooperation with organizations throughout the Federal Government. In the case of these recommendations, NHLBI will refer the recommendations to organizations that do have the legal authority to implement appropriate responses. Moreover, through the efforts of the congressionally mandated Interagency Technical Committee (IATC) on Heart, Blood Vessel, Lung, and Blood Diseases and Resources which the Institute chairs and other cooperative mechanisms, NHLBI will often coordinate planning of these multiorganizational responses, and will encourage consideration of appropriate implementation measures. Some may be achieved through administrative decision, but others seem to require legislative authorization. If implementing organizations require technical assistance in formulating their response, the IATC is an existing vehicle through which NHLBI can provide that assistance.

- For recommendations concerning directions for biomedical research, NHLBI will alert the scientific community to the need for such research and will ensure that the NHLBI process for planning research initiatives is sensitive to proposals for the conduct or support of such research.

- There are several recommendations to which response depends upon provider groups and the private sector.

Within these five categories of response, NHLBI has further broken down specific actions that might be taken to address the individual recommendations.

The following section of this report outlines the individual actions which NHLBI plans in response to recommendations of the National Black Health Providers Task Force. The presentation restates each recommendation and is accompanied by a brief description of contemplated activities. The order of presentation parallels the Final Report of the National Black Health Providers Task Force.

IV. REVIEW AND RESPONSE TO RECOMMENDATIONS

A. PROVIDER ROLES

RECOMMENDATION NO. 1

The task force recommends that the proposed provider roles developed by the task force be circulated widely for consideration and adoption by practitioners and institutions which serve black populations.

RESPONSE TO RECOMMENDATION NO. 1

The provider role recommendations represent the heart of the effort of the National Black Health Providers Task Force (NBHPTF). The NHLBI staff will work with the Health Services Administration, the constituent organizations of the NBHPTF, the National High Blood Pressure Education Program (NHBPEP) Coordinating Committee and its constituent organizations and others to circulate these recommendations widely.

The final report of the task force presents detailed recommendations regarding the professional roles in high blood pressure control of six categories of providers (i.e., physicians, nurses, dentists, pharmacists, optometrists, and podiatrists). A monograph will be prepared for each of these professions. These monographs will contain extracts from the final report relevant to each discipline, organized to facilitate simplified reference and use of the material.

The Institute will cooperate with the provider associations represented on NBHPTF in disseminating the task force report and the provider monographs to their respective memberships. Technical assistance activities of the National High Blood Pressure Education Program will be coordinated with the efforts of the provider organizations to attain maximum penetration of the relevant provider communities.

Also, support will be encouraged from other public and private entities. In addition to the NBHPTF recommendations, the activities of the NHBPEP's new Joint National Committee, the Interdisciplinary Task Force, the Working Group on Physician Patient Interaction and the NHLBI's Behavioral Medicine Branch's Working Group on Compliance have developed or will be developing materials which may be of value in promoting increased interdisciplinary cooperation in high blood pressure education and control, among black Americans and others. These materials will be packaged properly and circulated through the channels which reach black practitioners.

B. COMMUNITY EDUCATION AND COORDINATION

RECOMMENDATION NO. 1

The task force recommends that the National Heart, Lung, and Blood Institute of the National Institutes of Health provide all necessary support to achieve the selection of four sites to serve as demonstration projects to implement the recommendations of the task force in the detection, treatment and control of high blood pressure in the black community.

RESPONSE TO RECOMMENDATION NO. 1

This recommendation addresses an area of substantial needs and the concept is feasible and desirable. The role of these demonstration projects would be to implement a comprehensive range of task force recommendations in one of the settings discussed by the task force--the Comprehensive Health Centers.

The four site demonstration plan would utilize two rural and two urban primary care centers offering comprehensive clinical services. As currently envisioned, the plan would be a collaboratively funded and implemented activity with the Bureau of Community Health Services of the Health Services Administration, and would conduct hypertension control demonstrations for a period of 5 years. The program would encompass training, control, education, coordination and evaluation. In addition to sharing in the funding, the NHLBI role would be to participate in planning, to assist in health professional education and evaluation, and to provide the resources of the National High Blood Pressure Education Program.

RECOMMENDATION NO. 2

The task force recommends that a collaborative effort be sought with the local outlets of selected facilitator organizations as community coordination centers in high blood pressure education and control demonstration projects.

RESPONSE TO RECOMMENDATION NO. 2

The Institute is sympathetic to the use of facilitator organizations such as religious organizations, civic groups, fraternal and community service groups and sees their potential roles as varied and significant. In fact, this approach to program implementation has long been a component of the NHBPEP strategy. Some of the possible activities which the Institute would consider as relevant responses to this recommendation include:

- Pilot illustrative activities with special subgroups such as young males, and members of religious and social organizations.

- Preparation of briefing materials concerning existing demonstration activities and successful methods they have used.

- Use of the 1980 minority HBP forum to increase communication with facilitator organizations.

- Study of two existing NHLBI, HBP demonstration programs in black operated facilities which may serve as organizational models for future projects.

RECOMMENDATION NO. 3

The task force recommends that a joint planning council be established on both a national and local level to oversee the implementation of its recommendations.

RESPONSE TO RECOMMENDATION NO. 3

Joint planning will be encouraged through providing opportunities for NBHPTF member organizations with substantial HBP activities to become actively involved the NHBPEP Coordinating Committee which is the focal point for facilitating implementation through national health organizations and programs. NHLBI will continue to stress minority membership in its planning committees and will continue to rely on the NHBPEP Coordinating Committee to oversee implementation of recommendations, and on the Committee on Hypertension in Minority Populations for advice and counsel. Other mechanisms which the Institute will employ to encourage minority representation in the planning of programs outside NHLBI include providing the Health Services Administration (HSA) with a roster of minority HBP consultants, cooperation with existing minority programs, and sponsorship of the 1980 minority high blood pressure forum.

RECOMMENDATION NO. 4

The task force recommends that those facilitator organizations who agree to serve as coordination centers in the implementation of task force recommendations be allocated adequate monies to develop and perform the programmatic initiatives necessary to the successful completion of this effort.

RESPONSE TO RECOMMENDATION NO. 4

In the past, NHLBI has had several successful funding experiences in support of minority facilitator organizations. The Baltimore Provident Hospital/Church Program is one example. Such programs can serve as models for developing future funding arrangements and NHLBI intends to assess the strengths of these existing kinds of arrangements as well as to explore innovative methods of providing funds to organizations in the facilitation of community demonstration projects. The implementation of many task force

recommendations represent health service and health promotion beyond demonstration, thus beyond the Institute's mandates. The Institute is fully supportive of the concept of the recommendation, but cannot be the major source of such funding.

RECOMMENDATION NO. 5

The task force recommends that a thorough evaluation of the effect of public awareness and education approaches as they specifically relate to the black populations is most appropriate; and based upon the outcome of this study, the task force recommends that the National Heart, Lung, and Blood Institute implement a targeted awareness and education campaign in selected localities.

RESPONSE TO RECOMMENDATION NO. 5

A wide range of NHLBI programs are seeking to assess approaches that specifically relate to the black population. Numerous NHLBI/NHBPEP efforts have reflected evaluative results of educational and biomedical research approaches including the past and present Harris Survey, and the Hypertension Detection and Followup Program. The Demonstration Program on the Impact of Statewide Coordination of High Blood Pressure Control on Control Success and Reduction of Mortality from High Blood Pressure Related Diseases provided for oversampling in the black communities in several states in order that evaluative results can be utilized in developing future program goals and objectives. The NHBPEP has a policy of pretesting most materials, including those for black audiences, to assure a positive effect on health attitudes and behaviors. The Institute will continue to support such approaches.

RECOMMENDATION NO. 6

The task force recommends the establishment of undergraduate and/or graduate programs for the training of communication specialists with a concentration in health education.

RESPONSE TO RECOMMENDATION NO. 6

The training of communication specialists is outside the purview of NHLBI. However, such a recommendation can be incorporated into existing Health Resources Administration (HRA) training programs, and NHLBI will transmit the task force report to HRA and focus attention on this recommendation. Moreover, the dissemination of biomedical research findings that impact on large target populations will continue to be a major area of Institute concern. Better utilization of National Library of Medicine educational satellite for remote rural health providers can accelerate dissemination of Hypertension Detection and Followup Program findings and NHLBI will work toward this goal.

C. BIOMEDICAL AND EPIDEMIOLOGIC RESEARCH

RECOMMENDATION NO. 1

The task force recommends that controlled studies be done that further elucidate the relationship in an infant between increased cardiac output and high blood pressure.

RESPONSE TO RECOMMENDATION NO. 1

The report of the recent Hypertension Task Force indicates that one of seven areas of research emphasis should be the study of blood pressure regulation, hypertension, and antihypertension therapy during growth and development of the child. This finding is concordant with that of the NBHPTF. It will be of interest to the scientific community and NHLBI will be sensitive to research opportunities in this area.

RECOMMENDATION NO. 2

The task force recommends that controlled experiments be conducted to elucidate the relationship between potassium loading and the retardation of development of systemic high blood pressure as a preventive measure during infancy and the developing years.

RESPONSE TO RECOMMENDATION NO. 2

In addition to the recommendation of the NBHPTF, the Hypertension Task Force has also suggested that this issue in infants has not yet been explored fully. NHLBI is not currently funding grants in this area. The recommendation will be of interest to the scientific community and the Institute will be sensitive to future opportunities to sponsor such research.

RECOMMENDATION NO. 3

The task force recommends that studies addressing the problem of sodium loading in infancy and subsequent development of systemic high blood pressure be continued.

RESPONSE TO RECOMMENDATION NO. 3

NHLBI is currently supporting about 30 research grants with major emphasis on the role of salt and water in the pathogenesis of hypertension. Other task forces have recommended that an emphasis be placed on research on the effect of high sodium in infancy, and NHLBI will continue to sponsor research concerning the relationship between sodium loading and subsequent development of systemic high blood pressure.

RECOMMENDATION NO. 4

The task force recommends that a controlled experiment be done to elucidate the apparent difference in finding of the Bogalusa study versus national data collected on a random basis in the Health and Nutrition Examination Survey.

RESPONSE TO RECOMMENDATION NO. 4

In its analyses, NHLBI has recognized the apparent discrepancies between the Bogalusa study and national data. The topic will be referred to the Clinical Applications and Prevention Advisory Committee of the Division of Heart and Vascular Diseases.

RECOMMENDATION NO. 5

The task force recommends that the appropriate studies be conducted to determine the reasons for the statistically significant blood pressure distribution differences between blacks and whites after the age of adolescence.

RESPONSE TO RECOMMENDATION NO. 5

The etiological factors for hypertension are the topic of extensive research and the basis for differences in blood pressure levels of blacks and whites are among the topics of research. These efforts will be continued since through a better understanding of etiology we have a better opportunity for prevention.

RECOMMENDATION NO. 6

The task force recommends that further study be devoted to comparative differences between the physiology of the salt retaining kidney and the salt excreting kidney.

RESPONSE TO RECOMMENDATION NO. 6

NHLBI is currently supporting activities on this topic, for example, through studies at the Indiana University Specialized Center of Research. In addition, the scientific community has expressed interest in this area. Investigators at the University of Alabama and the University of Minnesota are currently seeking to initiate studies in this area and NHLBI will be sensitive to such research proposals.

RECOMMENDATION NO. 7

The task force recommends that further studies be done to elucidate the differences between the salt retaining and the salt excreting kidney caused by factors such as the control of blood volume, extracellular volume, rates of excretion, renal hormones including renin renal medullar lipids, kallikrein and hormones unrecognized to date.

RESPONSE TO RECOMMENDATION NO. 7

NHLBI has actively supported studies in this area and will continue to support research to elucidate the differences identified and heretofore unrecognized active agents.

RECOMMENDATION NO. 8

The task force recommends that methodology be developed to separate the impact of sodium manipulation from other factors such as body weight and potassium intake.

RESPONSE TO RECOMMENDATION NO. 8

This recommendation is similar in intent to one made by the Hypertension Task Force. The NHLBI Division of Heart and Vascular Diseases has prepared an initiative for supporting research in this area. This initiative did not fall within the fundable activities for FY 1980. The issue will be reconsidered as funds become available.

RECOMMENDATION NO. 9

The task force recommends that a methodology be developed to accurately measure sodium intake, metabolism and excretion. This should be done in a mode that will promote experimental accuracy with methodologies pointing toward the clinical usefulness of these measurement techniques.

RESPONSE TO RECOMMENDATION NO. 9

NHLBI has been alerted to needs in this area. The Arteriosclerosis, Hypertension, and Lipid Metabolism Advisory Committee and the DHVD Executive Committee approved a request for proposal to solicit relevant research. RFP NHLBI-80-12 issued in January 1980 addresses this topic. Contract award is anticipated in 1980.

RECOMMENDATION NO. 10

The task force recommends that studies be done to clarify the relationship between sodium and potassium and vascular resistance.

RESPONSE TO RECOMMENDATION NO. 10

This recommendation is similar in intent to one made by the Hypertension Task Force. The NHLBI Division of Heart and Vascular Diseases has prepared an initiative for supporting research in this area, but this initiative did not fall within the fundable activities for FY 1980. The issue will be reconsidered as funds become available.

RECOMMENDATION NO. 11

The task force recommends that studies be designed and undertaken to detect the basic underlying mechanism for salt intake, taking into account cultural differences, as these may be important in the types of products that are developed to address the salt appetite problem.

RESPONSE TO RECOMMENDATION NO. 11

The task force deliberations have sensitized NHLBI to the importance of this problem and it has been taken into consideration in the planning of new solicitations. The inclusion of cultural factors in such studies will be considered in the solicitation and review process.

RECOMMENDATION NO. 12

The task force recommends that controlled studies be done to determine the exact nature and extent of the blood pressure lowering effect of potassium in human beings.

RESPONSE TO RECOMMENDATION NO. 12

Potassium supplementation is part of a recently funded collaborative study which is being conducted in Mississippi, Alabama and New York. Blacks constitute a major portion of the study population.

RECOMMENDATION NO. 13

The task force recommends that studies be done on the prevention of the development of high blood pressure.

RESPONSE TO RECOMMENDATION NO. 13

NHLBI concurs with this recommendation. Basic research on this topic has been long ongoing and recently clinical investigation has been undertaken with this goal. The topic will undoubtedly lead to increasing activity.

RECOMMENDATION NO. 14

The task force recommends that data on the general intake of potassium with respect to the age/race/sex and socioeconomic status be gathered and analyzed.

RESPONSE TO RECOMMENDATION NO. 14

Inquiries to other governmental agencies indicate that the National Center for Health Statistics has data regarding general intake of potassium which will become available late in this year. The U.S. Department of Agriculture also has data which with further analysis could be used to estimate potassium values. NHLBI will encourage both of these organizations to continue their efforts to prepare the existing data for study.

RECOMMENDATION NO. 15

The task force recommends that the appropriate Federal agencies begin to develop appropriate relationships with governments, universities and health systems within countries where there may be a prevalence of uncontrolled blood pressure in areas from which blacks migrated. Objectives:

1. To provide technical assistance in the development of appropriate mechanisms to assess prevalence of high blood pressure and incidence of illness related to uncontrolled high blood pressure.

2. To provide collaboration involving governments and other interested parties in the development of intervention strategies in areas of uncontrolled blood pressure and diseases that may lend themselves to an education-demonstration strategy.

3. Collaboration between investigators and practitioners from the U.S.A. and their counterparts in these countries should be encouraged in the areas of behavioral, biomedical and epidemiological aspects of uncontrolled blood pressure. Emphasis should be on discovery of relationships between high blood pressure of black Americans vis-a-vis areas from which these black Americans migrated. There should be a balanced representation of black investigators in the aforementioned studies.

RESPONSE TO RECOMMENDATION NO. 15

The NHBPEP and the Health Education Branch (HEB); and NHLBI will continue to build international relationships with countries with high blood pressure interest and research studies congruent with NHLBI interests. As a part of this effort, HEB delivered, in October 1979, specific designated recommendations from the NBHPTF to the director of cardiovascular diseases, World Health Organization. In addition, HEB staff have for the past several years worked with the International Program Office of the NHLBI, to identify opportunities and propose approaches to meeting the NBHPTF needs as well as other needs and these efforts too will continue.

D. DELIVERY SYSTEMS ISSUES--RESEARCH AND POLICY RECOMMENDATIONS

RECOMMENDATION NO. 1

The task force recommends that appropriate research be conducted to identify approaches for eliminating the obstacles presented when race and class-related communication problems occur between blacks and the providers who treat them.

RESPONSE TO RECOMMENDATION NO. 1

This is essentially an issue of provider attitudes and the possible impact of negative or cultural biased provider attitudes on provider-patient interactions.

The research issues which may present themselves may be topics of interest to the scientific community and the recommendations will also be transmitted to the National Center for Health Services Research.

These issues ought to be considered also by the local consensus building efforts addressed in the response to delivery systems recommendation no. 2.

RECOMMENDATION NO. 2

The task force recommends that research be conducted to determine how to increase provider consensus regarding professional roles and interactions in high blood pressure control.

RESPONSE TO RECOMMENDATION NO. 2

This recommendation is addressed primarily to the need for developing local consensus among practicing health care providers.

NHLBI has engaged in a number of exercises which promote national provider consensus. The Joint National Committee on High Blood Pressure Detection, Evaluation, and Treatment, and the Interdisciplinary Task Force on Provider Roles represent expert panel models, whereas the National High Blood Pressure Education Program Coordinating Committee and the National Black Health Providers Task Force on High Blood Pressure Education and Control are illustrative of the organizational representation model. The suggested research might assist in identifying the effectiveness of elements of these approaches in attaining role consensus among practitioners.

RECOMMENDATION NO. 3

The task force recommends that research be conducted to determine how to overcome the lack of consistency and interest among some providers in high blood pressure management.

RESPONSE TO RECOMMENDATION NO. 3

The genesis of this recommendation reflected the concern of NBHPTF regarding physicians who may not view high blood pressure among blacks as a matter requiring serious, consistent attention. The Food and Drug Administration Survey of 1977 estimated that a significant minority of the physicians may not be acting in consonance with the Joint National Committee recommendations.

The Interdisciplinary Task Force on Provider Roles has reviewed concerns related to provider attitudes in high blood pressure management. Recommendations are forthcoming which will be applicable to this recommendation.

RECOMMENDATION NO. 4

The task force recommends that the National Institutes of Health and the National Heart, Lung, and Blood Institute expand and accelerate their efforts to disseminate research findings to black-utilized practice settings, professional organizations and publications.

RESPONSE TO RECOMMENDATION NO. 4

The NHBPEP provides for a diffusion strategy for each report, brochure and recommended guideline developed. The minority diffusion plan utilizes the Ad Hoc Committee on Hypertension in Minority Populations, Division of Heart and Vascular Diseases Research Training and Development Branch, Office of Special Concerns, and the NIH-EEO office for the dissemination of culturally relevant materials.

The request for proposal for the NHBPEP support contract is requesting an increased expenditure for conference logistical support including workshops, conferences, seminars and working groups, directed to minority professional organizations.

Additional use is planned of the professional journals of the organizations represented on the NBHPTF and of such minority-focused health publications as the Journal of Urban Health.

RECOMMENDATION NO. 5

The task force recommends that pilot data systems projects are required to test the feasibility of storing, retrieving, and communicating important data on hypertensives for the use of providers in areas where providers are isolated geographically, and where high blood pressure control activities are fragmented.

RESPONSE TO RECOMMENDATION NO. 5

The NHBPEP presently has guidelines on patient tracking systems under development and these will be disseminated upon completion. The NHBPEP will continue to provide assistance and active participation in rural and urban high blood pressure control efforts where the Bureau of Community Health Services requests our input.

RECOMMENDATION NO. 6

The task force recommends that consensus building be initiated among providers for the purpose of agreement upon providers continuing education programs, the cognitive, attitudinal and behavioral objectives of such programs, and the numbers and categories of professionals who could be included in such programs.

RESPONSE TO RECOMMENDATION NO. 6

This recommendation is relevant to the issue of promoting acceptance of the provider role recommendations of the NBHPTF. The approaches suggested to implement the provider role recommendation would appear to meet this need.

RECOMMENDATION NO. 7

The task force recommends that nontraditional settings be utilized for the detection of high blood pressure among hard-to-reach blacks.

RESPONSE TO RECOMMENDATION NO. 7

The lower awareness and control rates of blacks, especially younger black males, as reaffirmed in the statewide hypertension demonstration projects, attests to the need to accelerate and intensify the efforts to reach previously unreached black populations.

NHLBI will facilitate the diffusion of successful approaches used in HDFP and various private projects, for example, in ongoing projects in Chicago and Memphis. Also, NHLBI will continue its collaborative efforts with the Health Services Administration, U.S. Department of Agriculture and other Federal agencies to develop a comprehensive program of reaching the black population in a variety of settings.

RECOMMENDATION NO. 8

The task force recommends that every patient be guaranteed continuity of care from diagnosis through therapy and maintenance, and that medical record-keeping be maintained in a manner supportive of care continuity.

RESPONSE TO RECOMMENDATION NO. 8

The issue of continuity of care is being considered by the Interdisciplinary Task Force on Provider Roles (ITFPR) of the National High Blood Pressure Education Program as a long-range approach.

The NHBPEP emphasis on patient tracking systems has maintained a special interest in minority/black/union concerns including special problems of record-keeping of confidential matters.

RECOMMENDATION NO. 9

The task force recommends that health system agencies give high blood pressure detection, treatment, and control the highest possible priority in their health service plans and annual implementation plans.

RESPONSE TO RECOMMENDATION NO. 9

The implementations of this recommendation can be facilitated by the actions of the NHLBI's National High Blood Pressure Education Program.

As the NHBPEP has developed planning concepts over the past 7 years, so have the similar health planning concepts evolved in the local communities. The complex issue of comprehensive health planning suggests that high blood pressure control can eventually be incorporated into 5-year plans and annual implementation plans; some HSAs have succeeded. However, the NHBPEP must allow time for the development of local working plans before these logical approaches can be incorporated into NHBPEP guidelines.

NHBPEP will increase its activities, in the short run, in the following ways:

- Greater involvement with the Bureau of Health Planning and Resource Development of the Health Resources Administration in order to market NHBPEP goals, objectives and products, including transmittal of this recommendation.

- Greater participation in the National Health Planning Council to assist in the development of a coordinated approach to high blood pressure control efforts.

This recommendation will be circulated to the member organizations of the National High Blood Pressure Education Program Coordinating Committee and the participating organizations in NBHPTF for such complementary actions as may be deemed appropriate by them.

RECOMMENDATION NO. 10

The task force recommends that additional research and field testing be conducted in setting utilized by blacks to determine if dosettes can be produced and marketed at prices within reach of poor blacks.

RESPONSE TO RECOMMENDATION NO. 10

This recommendation will be transmitted to the American Pharmaceutical Manufacturers Association.

E. NUTRITIONAL ISSUES

RECOMMENDATION NO. 1

The task force concurs in the statement on the role of dietary management approved by the National High Blood Pressure Education Program Coordinating Committee, published in March 1979. The special recommendations contained in the statement, which were prepared for physicians and other providers, are as follows:

- Weight reduction should be routinely considered in the treatment of overweight borderline hypertensives, both for its potential in lowering blood pressure and for its general health benefits.
- Practitioners should encourage weight reduction for the obese hypertensive patient, and if blood pressure is reduced to and maintained at normal levels, it should be used as definitive therapy.
- For overweight patients who experience significant side effects from drugs, weight reduction should be considered as adjunctive therapy to help reduce drug dosages.
- Persons with a family history of hypertension should avoid excessive weight gain and reduce if overweight.
- Prevention or control of obesity in the young should be regarded as having positive health benefits and as a possible preventive step for hypertension.
- Practitioners should recommend a gradual weight loss over time. Drastic weight loss and fad dieting should be discouraged. Practitioners recommending weight reduction should seek to identify a regimen that incorporates realistic goals for each overweight hypertensive. Practitioners should ensure that adequate dietary information is provided.
- Research into the mechanisms relating body weight and hypertension should be pursued.
- Efforts should be continued and expanded to improve patient education in nutrition, to improve dietary counseling for weight reduction, and to improve motivational techniques for adherence to diet therapy.

A (caveat): The goal of weight reduction in hypertension therapy is to lower blood pressure to normal or near normal levels. If reduced caloric intake does not achieve this goal, or if the patient does not lose weight, adequate drug therapy should be used.

Recommendations for Sodium Intake

- Moderate sodium restriction should be routinely considered as a possible element in the treatment of all hypertensives.
- Practitioners should encourage sodium restriction, and if blood pressure is reduced to and maintained at normal levels, it should be used as definitive therapy.
- For patients who experience significant side effects from drugs, sodium restriction should be considered as adjunctive therapy to help reduce drug dosages or increase drug efficacy.
- Persons with a family history of hypertension should be encouraged to restrict sodium intake.
- Practitioners recommending sodium restriction should indicate specific diets appropriate to each patient's condition and lifestyle and should ensure that the diet is explained satisfactorily.
- Labeling of sodium content in foods should be encouraged and the development of labeling regulations should be supported.
- Research on the role of sodium in the etiology and treatment of hypertension should be pursued.
- Efforts should be continued and expanded to improve patient education in dietary sodium intake and to improve motivational techniques for long-term adherence to diet therapy.

A (caveat): The goal of sodium restriction in hypertension therapy is to lower blood pressure to normal or near normal levels. If sodium restriction does not achieve this goal, adequate drug therapy should be used.

RESPONSE TO RECOMMENDATION NO. 1

This recommendation is supportive to the published NHBPEP Coordinating Committee's statement on nutrition. It is viewed as a policy statement which is subsumed in and addressed by recommendations on the role of health providers.

RECOMMENDATION NO. 2

The task force recommends that further research be conducted to determine the value of diet modification in the treatment of high blood pressure.

RESPONSE TO RECOMMENDATION NO. 2

In recent years, the Institute has encouraged the receipt of grant applications relating to the relationship of diet and hypertension. As a result, an investigator initiated collaborative clinical trial has been approved and funded to study the effect of diet modification (sodium restriction, potassium supplementation, weight reduction) as a substitute for drug therapy and as an adjunct to pharmacologic treatment for hypertensives undergoing treatment.

RECOMMENDATION NO. 3

The task force recommends that further research be conducted to determine if a modest level of sodium restriction (i.e., a level which might be generally acceptable) could produce a significant reduction in blood pressure among blacks.

RESPONSE TO RECOMMENDATION NO. 3

The need for research on the effect of mild sodium restriction in hypertension has been proposed in an initiative submitted to the Institute's Division of Heart and Vascular Diseases Executive Committee for review. The initiative was enthusiastically received; however, due to the restrictive level of funding for FY 81, it does not appear to be implementable at this time.

In the current year, the Institute has solicited research on the development of methodology to allow a more quantitative assessment of actual sodium intake that is logistically feasible in free living populations. The availability of such methodology will enhance the effectiveness of studies designed to achieve the goals of this recommendation.

RECOMMENDATION NO. 4

The task force recommends that further research be conducted to identify successful strategies for achieving long-term dietary change with emphasis upon: black cultural differences and practices in terms of food habits, eating patterns, and health and food beliefs; socioeconomic and education factors; age, sex, and geographic factors; and current lifestyle trends.

RESPONSE TO RECOMMENDATION NO. 4

The NHLBI views the diet modifications suggested by the Hypertension Task Force and approved by NBHPTF to be potentially useful adjuncts to hypertension therapy among blacks and others.

In a current NHLBI supported study which includes strategies for dietary change found to be effective among blacks, a total of 700 patients will be involved from three centers--the University of Mississippi Medical Center, the University of Alabama, and the Albert Einstein College of Medicine in New York City. The study population at the University of Mississippi is comprised of 100 percent blacks; at the University of Alabama and the Albert Einstein College of Medicine, the racial distribution is approximately 30 percent black. Strategies for achieving and maintaining long-term dietary change are being developed which will recognize the different cultural, geographical, socioeconomic, and educational backgrounds of the target populations to be studied.

RECOMMENDATION NO. 5

> The task force recommends that research be conducted to determine the value of altering the sodium intake of family members of hypertensives as a primary prevention strategy.

RESPONSE TO RECOMMENDATION NO. 5

This recommendation addresses the possibility of facilitating primary prevention for family members of hypertensives by altering family sodium intake. Familial tendencies are assumed in this argument to present greater risks. Sodium reduction is assumed to be effective. To test such a hypothesis requires proof that alteration of sodium intake has a causal link in prevention of hypertension. The results of research on nutritional recommendation no. 2 will provide insights for further exploration of this question.

The Institute supports the need for further research to test whether the development of hypertension is preventable by dietary intervention in persons considered to be prone to the development of hypertension in the future.

RECOMMENDATION NO. 6

> The task force recommends that a cookbook be compiled by black nutritionists and physicians for the use of black hypertensives and their families which would take into account black food preferences whenever possible.

RESPONSE TO RECOMMENDATION NO. 6

The Health Education Branch of the NHLBI's Office of Prevention, Education and Control will assume responsibility for developing and disseminating a culturally relevant cookbook suitable for patients with dietary regimens. The NHBPEP statement on The Role of Dietary Management in High Blood Pressure Control can be marketed to culinary authors and publishing companies.

Some therapeutic cookbooks do exist for cosmopolitan populations including the American Heart Association Cookbook and some cookbooks by black nutritionists. Articles on culturally oriented eating are often featured in popular publications such as Ebony and Essence. The NHBPEP will explore these opportunities and other new areas of communicating dietary management to minority patients with high blood pressure. Black dieticians who are active in this field will be consulted as necessary.

RECOMMENDATION NO. 7

The task force recommends that the medical and continuing education curricula for physicians and other providers place more emphasis upon nutrition, diet, and the counseling of patients with respect to the nutritional aspects of high blood pressure prevention, treatment, and control and particularly upon the nutritional history of black patients.

RESPONSE TO RECOMMENDATION NO. 7

The NHLBI, through the Health Education Branch of the Office of Prevention, Education and Control, will develop a plan to disseminate information on the role of nutrition and diet in high blood pressure. Special efforts will be made to include this information in medical school and continuing education curricula. In addition, the information will be targeted to health providers who would be encouraged to take the nutritional histories of their patients.

The report of the Joint National Committee II will include a recommendation for dietary management of all high blood pressure patients.

The NHLBI stresses, however, that education of providers and students must emphasize what is not known about the role of diet in high blood pressure control, as well as what is known.

RECOMMENDATION NO. 8

The task force recommends that nutritionists and dieticians who will serve in black communities should have an internship or intensive orientation in a provider facility serving black hypertensives.

RESPONSE TO RECOMMENDATION NO. 8

The NHLBI recognizes the importance of ethnic and cultural dietary subtleties and the need for dieticians to be aware of them.

It is noted that dieticians often do internships in approved sites which may or may not have black clientele. Thus, the use of extensive orientation to the culturally influenced diet patterns of black populations would appear to be the more universally applicable portion of this recommendation. This suggestion will also be included in NHLBI's transmittal of this recommendation to the relevant professional societies for their consideration.

RECOMMENDATION NO. 9

The task force recommends that the nutritional programs and practices of institutions feeding large concentrations of blacks, such as penal, mental, geriatric, educational and military facilities, be evaluated for their compatibility with high blood pressure control recommendation endorsed by the NBHPTF.

RESPONSE TO RECOMMENDATION NO. 9

The NHLBI will act to ensure that both pharmacological and dietary management recommendations be transmitted to key Federal agencies providing nutritional services to blacks, children, and elderly populations; to institutions serving large numbers of black hypertensives; and to institutions providing assistance for the development of therapeutic diets.

F. HEALTH EDUCATION ISSUES

RECOMMENDATION NO. 1

The task force recommends that health education for blacks must recognize black diversity.

RESPONSE TO RECOMMENDATION NO. 1

The NHLBI concurs with the basic policy position. This recommendation is viewed by NHLBI as a policy position which is subsumed in the operational aspects of several other recommendations and must be further incorporated into health education planning activities.

RECOMMENDATION NO. 2

The task force recommends that greater recognition and utilization be made of professionals trained as health educators who are not clinicians.

RESPONSE TO RECOMMENDATION NO. 2

The question of appropriate utilization of professional health educators has surfaced on numerous occasions including the initial NHBPEP Task Force II (Professional Education) and Task Force III (Community Education). During the intervening years, professional health educators have assumed an increasingly significant position in the health care delivery system by continuing to define their roles and discharging their responsibilities effectively. On each appropria occasion, the NHLBI/NHBPEP shall continue to define the roles of and to support efforts to better utilize professional health educators.

However, the greater issue that the program will pursue is trying to increase sensitivity to minority high blood pressure issues among all persons engaged in health education serving the black community.

RECOMMENDATION NO. 3

The task force recommends that every provider having interaction with black patients consider himself as a patient educator as well as a specific type of provider.

RESPONSE TO RECOMMENDATION NO. 3

NHLBI will transmit this recommendation to the provider organizations represented on the NBHPTF for the consideration of their members.

RECOMMENDATION NO. 4

The task force recommends that black clinicians, behavioral scientists, health educators, and communicators be identified and organized for the purpose of developing strategies calculated to induce black consumers to use high blood pressure detection, treatment, and control resources.

RESPONSE TO RECOMMENDATION NO. 4

The NHBPEP consumer communications strategies require a multi-disciplinary team approach. The program will use individual black health educators and communicators to assist in specific public service announcement production projects. In addition, a Health Education Seminar for Minority Populations is in the planning phase and scheduled for late 1980.

NHLBI is aware that the black population has numerous untapped human resources and social support systems existing in their community. Black health providers as well as many other valuable health providers and consumers continue to enhance the efforts of the NHBPEP through its Minority Committee.

RECOMMENDATION NO. 5

The task force recommends that each community with a significant black population should develop community resource centers for coordinating consumer health education and health services delivery components.

RESPONSE TO RECOMMENDATION NO. 5

The Institute is fully supportive of this recommendation. Better utilization of operational primary care facilities, including community health centers and state and county health departments, will continue to be a program effort. In addition, through national and regional efforts, Health Systems Agencies will be contacted and provided technical assistance to facilitate inclusion of high blood pressure control activities in the black population. Local Health System Agencies' 5-year plans and annual implementation plans will be monitored for the inclusion of high blood pressure control activities.

The NHBPEP has been aware that a coordinated consumer health education approach is the most cost-effective method; however, most black organizations have preferred to communicate individually with the program. It is anticipated that upon completion of pilot evaluation studies of communities with high prevalence of hypertension, new evidence will assist the program in coordinating consumer health education efforts.

RECOMMENDATION NO. 6

The task force recommends that careers as health educators should be promoted among young blacks in high schools and colleges.

RESPONSE TO RECOMMENDATION NO. 6

The NHLBI will transmit this recommendation to appropriate NIH and Health Resources Administration authorities and to such organizations as the various associations of institutions of higher learning and the National Education Association for consideration for inclusion in projects of career development at the high school and college levels.

RECOMMENDATION NO. 7

The task force recommends that health education for the health provider and the public be a primary emphasis in the four demonstration sites selected for the implementation of task force recommendations.

RESPONSE TO RECOMMENDATION NO. 7

The curriculum of provider roles to be prepared by the NHBPEP will be distributed to all demonstration sites to promote provider education. A patient health education curriculum should be prepared from a base of existing materials. This curriculum would be tailored for use by providers serving black populations.

The previously developed NHLBI/NHBPEP materials on provider/patient interactions present clear guidelines for developing the substance of the suggested curriculum. NHLBI's Working Group on Compliance Behavior can provide helpful information for use in developing the curriculum.

G. BEHAVIORAL STUDIES RELATED TO HYPERTENSION

RECOMMENDATION NO. 1

The task force recommends that studies be undertaken that address social stress factors related to high blood pressure such as crime, family tension, poverty, unemployment and underemployment.

RESPONSE TO RECOMMENDATION NO. 1

The topics identified in recommendations 1, 2, 3, 4, and 5 are closely related. They will be of interest to the relevant scientific communities. They will also be brought to the Clinical Applications and Prevention Advisory Committee of the Division of Heart and Vascular Diseases to be considered for feasibility and priority as a possible Institute initiative.

RECOMMENDATION NO. 2

The task force recommends that studies which examine the effect of environmental stresses such as living in sub-standard housing in high density areas, noise and generally crowded conditions be undertaken.

RESPONSE TO RECOMMENDATION NO. 2

See response under recommendation no. 1.

RECOMMENDATION NO. 3

The task force recommends that studies to examine psychological frustration of blacks as related to poor economic conditions, loss of locus of control, loss of hope and dissatisfaction with the social system be undertaken.

RESPONSE TO RECOMMENDATION NO. 3

See response under recommendation no. 1.

RECOMMENDATION NO. 4

The task force recommends that studies be undertaken to identify occupational factors which contribute to the accumulated buildup of stress including the impact of job insecurity, limited job opportunities, job dissatisfaction and job discrimination, unemployment and underemployment.

RESPONSE TO RECOMMENDATION NO. 4

See response under recommendation no. 1.

RECOMMENDATION NO. 5

The task force recommends that studies be undertaken to examine alcoholism and drug abuse in relation to high blood pressure.

RESPONSE TO RECOMMENDATION NO. 5

See response under recommendation no. 1. This recommendation will also be called to the attention of the Alcohol, Drug Abuse, and Mental Health Administration.

RECOMMENDATION NO. 6

The task force recommends that studies be undertaken to trace the family history of hypertension with emphasis on identification of similiarities or differences in psychosocial dynamics which impact the family.

RESPONSE TO RECOMMENDATION NO. 6

Current studies in Framingham and in the Institute-solicited program on high blood pressure in the young are exploring the role of familial factors in hypertension. Further studies in this area have also been recommended by the Working Group on Heart Disease Epidemiology and support for such studies is proposed as part of the initiative on longitudinal studies of coronary heart disease risk factors in the young. NHLBI will be alert to opportunities to fund research based on these data and will continue to be sensitive to the issues of family psychosocial dynamics.

RECOMMENDATION NO. 7

The task force recommends that studies be conducted which examine the prevalence of hypertension in mental institutions, the effect of mental health related chemotherapy on blood pressure, given the types of drugs which are most effective for chronic psychotic patients.

RESPONSE TO RECOMMENDATION NO. 7

The National Institute on Mental Health has direct responsibilities and more appropriate resources for the study of mental illness and its relationship to hypertension. NHLBI will call the recommendation to the attention of NIMH and will be available to provide technical assistance concerning the planning of hypertension related aspects.

RECOMMENDATION NO. 8

The task force recommends that studies be conducted comparing and contrasting the epidemiological data on hypertensive blacks in urban and rural areas of the U.S. in the north, south, east and west.

RESPONSE TO RECOMMENDATION NO. 8

NHLBI and other Federal research organizations have recognized the need for epidemiologic study in this area. Epidemiologic studies of hypertension among blacks and other groups are included as part of the ongoing Health Examination Survey of the National Center for Health Statistics. Additional studies are being considered as part of a possible NHLBI initiative on community surveillance of cardiovascular disease. The 5-year Follow-up Survey of Public Knowledge/Behavior vis-a-vis High Blood Pressure was designed to include an oversampling of blacks and data from that 1979 survey are being compiled and analyzed. NHLBI will facilitate distribution of these results to black providers and other providers serving black communities and will continue to support epidemiologic study as one avenue of investigation in hypertension research. Special emphasis on regional studies will be continued.

RECOMMENDATION NO. 9

The task force recommends that studies be conducted on stress management techniques of hypertension among blacks with attention to the effects of relaxation, yoga, and biofeedback methods.

RESPONSE TO RECOMMENDATION NO. 9

A program announcement of NHLBI interest in supporting research on the combination of pharmacological and nonpharmacological management of hypertension has recently been distributed. The proposed research would be a very appropriate response to this program announcement.

RECOMMENDATION NO. 10

The task force recommends that studies be conducted of coping mechanisms (behaviors) of black hypertensive patients and/or family of the patients.

RESPONSE TO RECOMMENDATION NO. 10

Several studies of coping mechanisms are now under way. These address stress management techniques as well as other variables such as cultural influences and income. NHLBI will continue support of these studies, noting the need to analyze for possible racial and cultural differences in relation to other study factors.

RECOMMENDATION NO. 11

The task force recommends that behavioral research be conducted in community-based research centers and where there are no such centers some be established in high density black areas where black churches, social, and other community organizations can be utilized to assist in monitoring research in the black community.

RESPONSE TO RECOMMENDATION NO. 11

The Institute recognizes that community-based research centers may offer important resources and attributes which could make behavioral research in such settings of particular value and aid in their competitive scientific review. The Institute shares the view that in such, as in all research, there must be both sensitivity and adherence to the highest ethical standards. All research involving human subjects supported by the Department must have undergone review and approval by the institutional review board of the grantee institution and participation of members of the involved community can be of great value.

H. MANPOWER

RECOMMENDATION NO. 1

The task force recommends that initiatives be undertaken to ensure a more representative involvement/employment of blacks in the health care industry of the U.S. by the year 2000. The following numbers and ratios would represent meaningful progress for physicians, dentists, optometrists, podiatrists, pharmacists, and nurses.

Physicians--ratio of 300 per 100,000 black population; 14.4 per 100,000 total population of 36,000 total physicians; total medical school enrollment at 20 percent by academic year 1982-1983.

Dentists--ratio of 89.7 per 100,000 per black population; 4.3 per 100,000 total population; or total 10,759 dentists; total dental school enrollment should be increased to 20 percent by academic year 1982-1983.

Optometrists--ratio of 10.8 per 100,000 black population; 0.5 per 100,000 total population of 1,295 total optometrists; total enrollment in schools of optometry should increase to 25 percent by academic year 1983-1984.

Podiatrists--ratio of 9.3 per 100,000 black population; 0.5 per 100,000 total population or 1,127 total podiatrists; total enrollment in schools of podiatry should increase to 20 percent by academic year 1982-1983.

Pharmacists--ratio of 111 per 100,000 black population; 5.3 per 100,000 total popuation of 13,321 total pharmacists; total enrollment in schools of pharmacy should be increased to 20 percent by academic year 1981-1982.

Registered Nurses--ratio of 1,256.7 per 100,000 black population; 60.8 per 100,000 total population; total enrollment in schools of nursing should be increased to 20 percent by academic year 1981-1982.

RESPONSE TO RECOMMENDATION NO. 1

The implementation of this recommendation would require the involvement of a number of private, public, and academic entities. NHLBI will transmit this recommendation to the organizations represented on the National High Blood Pressure Coordinating Committee, to the organizations represented on the NBHPTF and to appropriate Administration officials.

RECOMMENDATION NO. 2

The task force recommends that an institutional support program be authorized to provide financial assistance to health profession educational institutions that maintain a minimum black total enrollment of 12 percent black health profession students.

RESPONSE TO RECOMMENDATION NO. 2

This recommendation would appear to require a legislative remedy. The NHLBI staff will transmit this recommendation to the appropriate Administration officials and to the organizations represented on NBHPTF.

RECOMMENDATION NO. 3

The task force recommends that financial incentive programs be developed for the health professional schools of traditionally black institutions to increase the supply of black health manpower. These programs should be long-range propositions of 10 years or more and adequately funded to avoid financial distress and to ensure stability on the part of the institution.

RESPONSE TO RECOMMENDATION NO. 3

This recommendation would appear to require legislative remedy. NHLBI will transmit the recommendation to the appropriate Administration officials and to the organizations represented on NBHPTF.

RECOMMENDATION NO. 4

The task force recommends that the designated health manpower shortage areas be expanded to include more black urban inner-city communities that now suffer a marginal identity.

RESPONSE TO RECOMMENDATION NO. 4

The NHLBI believes that this recommendation will be of interest to the Health Resources Administration. NHLBI staff will transmit the recommendation to HRA and NBHPTF constituent organizations for consideration. manpower recommendation no. 13 presents a possible mechanism for achieving the stated objectives.

RECOMMENDATION NO. 5

The task force recommends that the recipients of National Health Service Corps scholarships and other service conditional awards be exempt from taxation on the scholarship portion of their income.

RESPONSE TO RECOMMENDATION NO. 5

This recommendation may require legislative changes. NHLBI staff will transmit this recommendation to the appropriate Federal agencies and to the organizations represented on the NBHPTF.

RECOMMENDATION NO. 6

The task force recommends that the Health Education Student Loan Program be adjusted to ease the burden of repayment by the student, specifically with regard to the length of time for repayment. It should include a deferred payment plan.

RESPONSE TO RECOMMENDATION NO. 6

This recommendation may require legislative or administrative rule changes. NHLBI will transmit this recommendation to the appropriate Federal agencies and to the organizations represented on the NBHPTF.

RECOMMENDATION NO. 7

The task force recommends that the available funds for health profession student scholarships be increased dramatically in order to increase the number of black recipients.

RESPONSE TO RECOMMENDATION NO. 7

This recommendation would appear to require legislation. NHLBI staff will transmit this recommendation to the appropriate Administration officials and to the organizations represented by the NBHPTF.

RECOMMENDATION NO. 8

The Black Health Providers Task Force recommends that the black health providers be charged with the responsibility of defining the health manpower requirements for the detection, treatment, and followup of high blood pressure control in the black community.

RESPONSE TO RECOMMENDATION NO. 8

This recommendation would appear to fall within the general purview of agencies charged with manpower planning for primary care resources. The Health Resources Administration's Bureau of Health Manpower would appear to be the appropriate agency at the Federal level, and the Institute will transmit to that agency the willingness of the constituent organizations of the NBHPTF to undertake this task.

RECOMMENDATION NO. 9

The task force recommends that the National Black Health Providers Task Force be charged with the responsibility of identifying health manpower alternatives for the detection, treatment and/or followup of high blood pressure in the black community.

RESPONSE TO RECOMMENDATION NO. 9

The NHLBI's High Blood Pressure Education Program has taken this recommendation to the Interdisciplinary Task Force on Provider Roles (ITFPR) for further deliberations.

It should be noted that the NBHPTF and Interdisciplinary Task Force on Provider Roles have recognized that effective interdisciplinary working relations are necessary to achieve satisfactory blood pressure control. The five issues identified: lack of awareness among professionals; turf protection; legal and liability constraints; lack of economic incentives; and health care systems organizations should assist the program in understanding and promoting the utilization of approprate manpower alternatives.

The program shall interpret NBHPTF and ITFPR recommendations into appropriate action to educate responsible Federal agencies, and the participating organizations in resolving manpower utilization problems.

RECOMMENDATION NO. 10

The task force recommends that the programs which forgive nursing and medical student loans through service in health manpower shortage areas be extended indefinitely and be expanded to include other professions--podiatry, optometry, pharmacy, and dentistry.

RESPONSE TO RECOMMENDATION NO. 10

It is NHLBI's understanding that this recommendation would require legislation for implementation. This recommendation will be transmitted to appropriate Administration officials and to the constituent organizations of NBHPTF.

RECOMMENDATION NO. 11

The task force recommends that more monies be earmarked for black colleges and universities for the development of research training programs specifically as they relate to high blood pressure research.

RESPONSE TO RECOMMENDATION NO. 11

The NHLBI sponsored Summer Hypertension Research Program, the Minority Access to Research Careers (MARC), and the Minority Biomedical Support (MBS) Programs are all targeted toward increasing the pool of Black researchers in HBP, many of whom will remain affiliated with historically Black institutions. These programs have aided many such institutions in evolving to a level of HBP research activity which, if continued, will make them attractive candidates for accelerated development and funding.

It is the intent of NHLBI to continue to encourage such institutions to develop research capabilities. Howard University, for example, is a primary training site in the Summer Hypertension Research Program, sponsored by NHLBI.

RECOMMENDATION NO. 12

The task force recommends that registered nurses be included among the other health professions assessed in the designation and assignment of health manpower shortage areas.

RESPONSE TO RECOMMENDATION NO. 12

It was the NBHPTF viewpoint that the relative scarcity of registered nurses (especially black nurses) in certain predominantly black urban and rural areas necessitates this recommendation.

This recommendation will be transmitted to the Health Resources Administration and the constitutent members of the NBHPTF.

RECOMMENDATION NO. 13

The task force recommends that smaller geographic units be utilized in the designation of health manpower shortage areas in order to address the unrecognized and acute manpower shortages in the inner city.

RESPONSE TO RECOMMENDATION NO. 13

The task force viewpoint was that the utilization of smaller geographic units in this regard would help to reflect the availability and accessibility problems in many inner-city areas.

This concern will be communicated to the Health Resources Administration and the constituent organizations of the NBHPTF. This recommendation is related to, and supportive of, recommendation no. 4.

I. PEDIATRIC HIGH BLOOD PRESSURE

RECOMMENDATION NO. 1

The task force recommends that all federally funded or supported health care facilities and providers offering maternal and child health services be required to have effective pediatric high blood pressure detection programs which are comprehensive and which emphasize prevention.

RESPONSE TO RECOMMENDATION NO. 1

The Task Force on Blood Pressure Control in Children recommended that children 3 years old and older should have their blood pressure measured annually as part of their continuing health care. NHBPEP marketing strategy for these recommendations included distribution to general provider populations as well as black health providers for incorporation in existing child care health programs. More specifically, the Health Services Administration/Bureau of Community Health Services (HSA/BCHS) has agreed to adopt the NHLBI pediatric report recommendations into BCHS guidelines with the modification that blood pressure measurement be made at 10 years of age rather than the recommended 3 years.

NHLBI/HEB will extend its present pediatric report marketing strategy to all federally funded programs/Institutes such as National Institute of Child Health and Human Development, Office of Human Development Services, and the Health Care Financing Administration.

RECOMMENDATION NO. 2

The task force recommends that the model high blood pressure control process developed by the National Black Health Providers Task Force be reviewed by an appropriate panel of black clinicians convened at the national level to determine whether a pediatric version of the process should be developed.

RESPONSE TO RECOMMENDATION NO. 2

The model high blood pressure control process developed by NHBPEP and illustrated in the Handbook for Improving High Blood Pressure Control in the Community has served as a straightforward approach to the understanding of control processes utilizing the principles of community health planning. Application of these planning principles were modified by the NBHPTF to meet the cultural diversity found in black community high blood pressure control efforts. NHLBI will advise the provider organizations of NBHPTF of the formation of any task forces and groups that may study pediatric hypertension, and seek their input. Because the science is inconclusive, NHLBI will continue to review carefully the results of cardiovascular research for their potential application to the pediatric population.

RECOMMENDATION NO. 3

The task force recommends that the labeling of children as hypertensive by providers should be avoided so that an overall health program, rather than drug therapy alone, may be implemented.

RESPONSE TO RECOMMENDATION NO. 3

NHLBI shall continue addressing the concerns that pediatric providers should be well informed regarding quality long-term preventive care to children with high normal blood pressures.

The NHLBI Report of the Task Force on Blood Pressure Control in Children--recommendation no. 5 stated that "caution should be exercised in labeling children as hypertensive because of psychosocial and economic implications; use of the term 'high normal blood pressure' is appropriate during evaluation and follow-up to avoid unnecessary negative implications." Recommendation #8 of that report clarifies that "children with sustained elevated blood pressure should receive a systematic long-term follow-up program, which may include hygienic counseling covering weight control, salt intake, exercise and smoking and anti-hypertensive pharmacotherapy."

The NHLBI will continually identify problems/consequences which might result from labeling of children and inappropriate sick-role behavior. Program input from the Committee on Hypertension in Minority Populations, and its black subcommittee, provides the Institute with a continual monitoring process for addressing psychosocial sensitive matters. The NHLBI plans to transmit this recommendation to all Federal agencies funding programs dealing with child care and to point out their importance to their program activities.

RECOMMENDATION NO. 4

The task force recommends that health providers include the families of hypertensive children as partners in the overall health program of their children.

RESPONSE TO RECOMMENDATION NO. 4

The Institute concurs fully. NHLBI will continue to identify those factors which affect parental health perceptions and attitudes as predictors of the extent to which they can comply with pediatric long-term medical regimens. The Institute has consistently identified the variables of the health belief model before developing black-oriented public service announcements, pamphlets, and brochures. In the future, special emphasis will be placed on compliance behavior among low income populations. Consistency in administering medication and keeping followup appointments will receive special attention.

J. FINANCIAL ISSUES

RECOMMENDATION NO. 1

The task force recommends that persons in the financial "gray area" should be covered for hypertension therapy under a suitable public program such as Title XVIII (Medicare) of the Social Security Act or other suitable legislation.

RESPONSE TO RECOMMENDATION NO. 1

This recommendation suggests a potential legislative remedy for covering persons whose income is not sufficient to cover the expenses of medical care, especially for a chronic disease such as high blood pressure. It is similar, in intent, to one which evolved from a Blue Ribbon Panel on Hypertension in the Elderly.

This recommendation will be forwarded to the Health Care Financing Administration, which is responsible for the Medicare and Medicaid programs for analysis of possible Executive Branch positions on the suggested legislation. It will also be submitted to the members of the National High Blood Pressure Coordinating Committee for their information and appropriate action. The experiences of the Hypertension Detection and Followup Transition Committee in identifying continuing care sources for "gray area" patients will be instructive to other agencies. The NHLBI believes that resolution of financing the high blood pressure care for the medically needy should be a high priority item.

RECOMMENDATION NO. 2

The task force recommends that the Medicaid program should undertake an intensive 5-year effort to detect and bring under effective control hypertensives who are Medicaid recipients. This effort should include drug coverage for antihypertensive medications.

RESPONSE TO RECOMMENDATION NO. 2

In certain parts of the country, there are substantial numbers of blacks (in addition to Hispanics, whites and others) who are covered by Medicaid for health services. For example, in the predominantly black city of Newark, New Jersey, nearly one-third of the population is eligible for Medicaid. It was the NBHPTF viewpoint that a targeted program operated under the auspices of state Medicaid agencies with the cooperation of provider, community, religious, and social service agencies could be effective.

Since this recommendation would involve administrative policy actions by the Health Care Financing Administration, it will be transmitted to that agency.

RECOMMENDATION NO. 3

The task force recommends that private third-party payors should be encouraged to include antihypertensive medications and treatments in their most widely utilized benefits package.

RESPONSE TO RECOMMENDATION NO. 3

NHLBI will transmit this recommendation to the associations which represent the majority of the private third-party payors in the Nation. These are: Blue Cross and Blue Shield Association; Group Health Association of America (group practice model Health Maintenance Organizations); Association of Foundations for Medical Care (independent practice mode HMO's); National Insurance Association; and Health Insurance Association of America.

The NHBPEP has defined and related to a third-party payor's role in cost effective methods for reimbursement for high blood pressure medication in the following ways:

- NHBPEP acted as the facilitator of the Black Economic Impact Workshop on December 6-7, 1979 to focus on the background analyses necessary to better understand essential components involved in reimbursement policy;
- NHBPEP has sponsored the Blue Cross demonstration project which should evaluate primary techniques for stimulation of local Blue Cross plans and the development and evaluation of worksite based high blood pressure education programs. Hopefully, the account executives' experiences can provide some soft data and information on reimbursement problems.

The NHLBI staff will invite the senior vice president of Illinois Blue Cross to brief senior Institute staff on that plan's preliminary analysis of the financial impact of BHPTF recommendations. This briefing and subsequent discussion may lead to the development of effective strategies for addressing this issue.

In the interim, where appropriate, the NHBPEP will continue to interpret reimbursement policy/guidelines as they relate to antihypertensive medications; and sensitize management and unions to blood pressure control issues which, in time, can be expected to impact on decisions regarding employees' benefit packages.

RECOMMENDATION NO. 4

The task force recommends that the Medicare program should be expanded to include drug coverage for antihypertensive medications.

RESPONSE TO RECOMMENDATION NO. 4

Title XVIII (Medicare) of the Social Security Act does not provide for prescription drug coverage except in inpatient facilities. Providing a basis for paying for antihypertensive medications for elderly and other Medicare beneficiaries could contribute to compliance with drug regimens and thus to improving the health status of such persons.

The NHLBI staff has been helpful to the House Committee chaired by Mr. Pepper in analyzing this issue.

RECOMMENDATION NO. 5

The task force recommends that the appropriate Federal agencies should make arrangements to assure that persons participating in high blood pressure clinical trials have adequate financial means to continue antihypertensive regimens at the conclusion of such trials.

RESPONSE TO RECOMMENDATION NO. 5

The task force expressed strong views favoring this recommendation. It was recognized that the financing of ongoing health services was not a part of NHLBI's mission. Thus, referral of this matter to an agency such as the Health Services Administration or the Health Care Financing Administration was viewed as being appropriate.

Much of the task force's concern evolved from the illustrative case of the Hypertension Demonstration and Followup Program. The HDFP Transition Committee developed plans for referral of stepped care (i.e., clinic care with support systems) patients to community sources for continuing care. A 2-year followup on blood pressure control and mortality is being implemented.

K. PHYSICIAN ASSISTANTS AND NURSE PRACTITIONERS

RECOMMENDATION NO. 1

The task force recommends that physician assistants (PA's) and nurse practitioners (NP's) not be permitted to prescribe medication for high blood pressure control without a physician's approval and where states permit the prescription of drugs by nurse practitioners and physician assistants that the states' regulations be made consistent with this recommendation.

RESPONSE TO RECOMMENDATION NO. 1

The NBHPTF position on this matter was an expression of the concern that no precedents be established which might compromise physician availability to low-income or minority populations for high blood pressure control or other chronic diseases control.

The potential abrogation of physician responsibility in the initial prescription or subsequent modification of drug therapy in favor of physician extenders was viewed as being an unhealthy development.

This recommendation will be discussed in the Report of the Interdisciplinary Task Force on Provider Roles and will be transmitted with their comments to interested agencies (e.g., Health Resources Administration, Health Services Administration), and professional societies.

RECOMMENDATION NO. 2

The task force recommends that inequity, where it exists, of reimbursement to physician assistants and nurse practitioners must be corrected and appropriate reimbursement mechanisms be determined for their services in high blood pressure control.

RESPONSE TO RECOMMENDATION NO. 2

Reimbursement inequity has been recognized as an issue by the High Blood Pressure Education Program Coordinating Committee. The committee's consensus was that reimbursement policy was not to be formulated by the committee.

The Interdisciplinary Task Force on Provider Roles is giving additional consideration to this issue. NBHPTF's and ITFPR's recommendations will be transmitted to interested groups.

RECOMMENDATION NO. 3

The task force recommends that special funding be made available to physician assistants' and nurse practitioners' programs for recruitment and retention of blacks.

RESPONSE TO RECOMMENDATION NO. 3

It was the consensus of the task force that, without special efforts, nurse practitioners and physician assistants training programs could easily establish the type of de facto racial exclusivity that had been prevalent in other professional schools until recent times.

With more expansive high blood pressure control roles being given to physician extenders in many minority communities, the fear was that an overwhelmingly nonblack physician extender corps might be the major source of physician extender services in black communities. The propensity of all black practitioners (extenders included) to establish long-term relationships in black communities was viewed as a practical reason to train more black physician extenders. Acting affirmatively to recruit and retain black students in physician extender programs was deemed critical.

NHLBI will assist in transmitting this concern of the task force to the relevant agencies, such as the Bureau of Health Professions of the Health Resources Administration, the Health Services Administration, and the Department of Labor, and to interested foundations, schools and provider organizations.

RECOMMENDATION NO. 4

The task force recommends that manpower requirements for physicians assistants and nurse practitioners, as they relate to high blood pressure control in the black community be defined by the National Black Health Provider's Task Force member organizations, specifically as it relates to such factors as education, geographic distribution, economics and risk factors.

RESPONSE TO RECOMMENDATION NO. 4

The status of manpower requirement data and statistics within the Bureau of Health Professions (BHPr) of the Health Resources Administration and other involved Federal agencies has not been fully evaluated in its relationship to the prevalence of high blood pressure in the black populations. Accurate projections should be made after a coordinated assessment has been completed.

The NHLBI will assist in the transmittal of this recommendation and related considerations to the BHPr and to the constituent organizations of NBHPTF.

RECOMMENDATION NO. 5

The task force recommends that minimum certification and licensure requirements for physician assistants and nurse practitioners regarding the provision of high blood pressure control services to the black community be defined by the NBHPTF constituent organizations.

RESPONSE TO RECOMMENDATION NO. 5

This recommendation will be transmitted to the NBHPTF's constituent organizations. It is noted that NHBPEP participation in the Provider Role Task Force has assisted in defining physician assistant and nurse practitioner suggested roles.

Certification and licensure are the responsibility of professional organizations and licensing boards, respectively the NBHPTF constituent organizations can act directly on their certification and influentially on the licensing boards.

Because most states have set minimum standards for certifying physician assistants and nurse practitioners, their roles in high blood pressure control services will need to be clarified locally. Local efforts aimed at interdisciplinary provider role definition should also address the roles of physician assistants and nurse practitioners.

RECOMMENDATION NO. 6

The task force recommends that high blood pressure patients in the black community being served by physician assistants and nurse practitioners be required to be seen by a physician at least once a year.

RESPONSE TO RECOMMENDATION NO. 6

The 1980 report of the Joint National Committee on Detection, Evaluation and Treatment of High Blood Pressure has posed a recommendation indicating the frequency with which patients with high blood pressure should be seen. Presently, it is the physician's prerogative to establish how often he/she will personally see a given patient. Most importantly, current medical regulations do not allow physician assistants and nurse practitioners to practice unsupervised in any state, district or territory.

The opinions of the NBHPTF and the Joint National Committee II will be circulated to the constituent organizations of the task force.

RECOMMENDATION NO. 7

The task force recommends that the quality of care be defined for nurse practitioners and physician assistants by the Black Health Providers Task Force constituent organizations, specifically as it relates to high blood pressure control in the black community.

RESPONSE TO RECOMMENDATION NO. 7

NHLBI will transmit this recommendation to the constituent organizations of the National Black Health Providers Task Force.

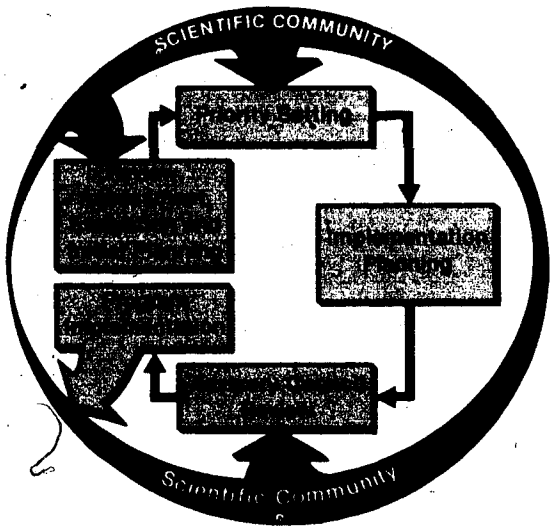
APPENDIX

THE NHLBI PLANNING PROCESS

Implementation of new initiatives or actions by the NHLBI must occur through the Institute's planning process. This process was established to ensure responsiveness to legislative mandates, identification and pursuit of the most promising opportunities, and the effective use of resources. It is an integrated and continuous process involving not only planning, but also implementation and evaluation; and provides for an annual update of the NHLBI 5-Year National Program Plan.

The process takes place in a yearly cycle which involves a continuous flow of information from the public, the medical community, other Federal agencies, and non-Federal organizations. The Institute is responsible for coordinating this flow and converting it into worthwhile programs. The scientific community plays a prominent role through participation on various advisory and review groups, task forces, and working groups involved in assessing progress and determining future directions of the program.

Figure 2. Steps in the NHLBI Planning Process



The process can be characterized as systematic and disciplined, while at the same time dynamic and varied in terms of specific approaches. It is designed to ensure a thorough review of the entire program as well as the implementation of new programs and the expansion, modification, or discontinuation of existing programs. This process involves five steps as follows:

- Review, assessment, evaluation, and initial planning of programs is done through a review of the goals, objectives, and progress of the 5-year National Program Plan with respect to the state of the science,

as well as the impact of the program on medical care and the health of the public. This is accomplished with the participation of the NHLBI program staff, general scientific community through workshops, task forces, and technical working groups convened to reach consensus on future directions for the program. The results of special evaluation studies provide important input to this step. The end-products of this step are an update of the Institute's 5-year plan and a preliminary list of program initiatives and recommended program directions for future years, together with revised objectives where appropriate.

- Priority setting is the second step in the process, in which proposed new initiatives for implementation in the next year are ranked according to goals and objectives of the national program, results, progress, and potential impact of ongoing programs, and fiscal and schedule constraints. This is accomplished jointly by the staff of the Institute's categorical divisions and appropriate advisory committees. The product of this step is a set of further defined initiatives, ranked by priority within major program categories.

- Implementation planning constitutes the third step, in which the staff of the categorical divisions and the NHLBI Office of the Director convert the ranked initiatives into specific program plans including programmatic justification, management and fiscal plans, and funding mechanisms. The endproduct of this step is the preliminary NHLBI implementation plan and program budget which reflects available resources, legislative mandates and intent, as well as inter-Institute and interagency responsibilities.

- Advisory council review consists of a thorough review of the implementation plan by the full National Heart, Lung, and Blood Advisory Council. Council advice and recommendations are solicited and considered in developing the final NHLBI implementation plan and program budget.

- Program implementation consists of translating specific mandates and approved initiatives contained in the implementation plan into operational projects. This is a complex process requiring the availability and application of scientific knowledge and resources of all kinds, including scientific manpower, facilities, equipment, and funds. Implementation is carried out through various types of grants and contracts, intramural research, collaboration with other Federal agencies through interagency agreements, as well as jointly supported international activities.

The NHLBI uses these major processes and systems to provide for expedient and effective program planning and implementation. These systems help to ensure appropriate transfer of research advances and provide for scientific validation of new techniques of prevention and treatment. The results of these processes are applied in NHLBI program implementation and are disseminated to the health care community as a whole.

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