Volume I:
Executive Summary

Report of the Secretary's Task Force on

Black & Minority Health

Margaret M. Heckler
Secretary

U.S. Department of Health and
Human Services

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August 1985

SECRETARY'S TASK FORCE ON BLACK AND MINORITY HEALTH

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TABLE OF CONTENTS

RECOMMENDATIONS OF THE TASK FORCE

ACCOUNTING FOR THE HEALTH STATUS DISPARITY

Subcommittee Summary Reports

APPENDIX

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Task Force on
Black and Minority Health

National Institutes of Health
Bethesda, Maryland 20205
(301) 496-6177

The Honorable Margaret M. Heckler
Secretary, Department of Health
  and Human Services
Washington, D.C. 20201

Dear Madam Secretary:

On behalf of the Task Force on Black and Minority Health, I am pleased to submit the report and recommendations of the Task Force for your review and consideration. The report consists of an executive summary volume presenting our major findings and recommendations, and additional volumes containing extensive background information and analyses supporting and extending the executive summary. These will be extremely useful to those who wish to become familiar in greater depth with selected aspects of the issues we have analyzed.

I believe this report is a landmark effort in analyzing and synthesizing the present state of knowledge of the major factors that contribute to the health status of Blacks, Hispanics, Asian/Pacific Islanders, and Native Americans. It represents the first time the Department of Health and Human Services (DHHS) has consolidated minority health issues into one report. This report should serve not only as a standard resource for departmentwide strategy, but as the generating force for an accelerated national assault on the persistent health disparities which led you to establish the Task Force a little more than a year ago.

It would be a disservice to the Task Force members, staff and consultants who worked so diligently on this project during the past year, to understate the complexity of the task we undertook. The issues identified during our deliberations and presented in this report are of major importance, but must not be regarded as the final word on the subject. Just as individual well-being is not static, the health needs of minority populations are changing. They are influenced by a diverse set of factors of which disease is but one aspect. The report, then, must continue to be updated and revised as new data and information become available.

In accordance with your charge, we have examined the impact of a broad range of behavioral, societal, and health care issues on the current departmental program areas. Our recommendations are consistent with the objectives for the Nation in disease prevention and health promotion for the year 1990. The six topics we have identified as priority areas merit intensive action and study in themselves, as do various issues such as nutrition and development of health professionals that cut across all health problem areas. We encourage the Department to continue to take the lead in implementing such activities.

The Task Force accomplished this monumental effort during the course of one year only by mobilization of resources across the DHHS agencies and by the dedicated contribution of all the Department staff who served on Subcommittees, responded to our inquiries, and provided supporting documentation necessary for us to arrive at these conclusions and recommendations. In addition, many health professionals and researchers outside the Federal government contributed to the Task Force efforts by educating the Task Force members, providing information, and enhancing our knowledge in ways we could not have accomplished on our own in the time available to us.

The report has already had an extraordinarily beneficial effect. The levels of awareness and sensitivity to the issues surrounding minority health have been greatly heightened among the individuals serving on the Task Force and through them, within the agencies, divisions, and programs of the Department. Many of the specific activities proposed by the Subcommittees of the Task Force are being integrated into the program plans of the agencies represented on the Task Force. Moreover, we have had the opportunity to share expertise and cultivate working relationships that will last beyond this particular effort. As a result, we are better prepared to serve as emissaries for positive action within the Department, our communities, and professional organizations.

The Task Force encourages you to identify the appropriate mechanisms whereby our recommendations can be incorportated into the body of the Department's programs and activities. If these recommendations can be implemented with the same spirit as their genesis, we will advance as a Department and as a Nation toward improving the health status of minority Americans today, with the assurance that we will all be healthier Americans tomorrow.

Sincerely yours,

Thomas E. Malone

Thomas E. Malone, Ph.D.
Chairman

THE SECRETARY OF HEALTH AND HUMAN SERVICES
WASHINGTON, D.C. 20201

In January 1984--ten months after becoming Secretary of Health and Human Services--I sent Health, United States, 1983 to the Congress. It was the annual report card on the health status of the American people.

That report--like its predecessors--documented significant progress: Americans were living longer, infant mortality had continued to decline--the overall American health picture showed almost uniform improvement.

But, and that "but" signaled a sad and significant fact; there was a continuing disparity in the burden of death and illness experienced by Blacks and other minority Americans as compared with our nation's population as a whole.

That disparity has existed ever since accurate federal record keeping began--more than a generation ago. And although our health charts do itemize steady gains in the health status of minority Americans, the stubborn disparity remained--an affront both to our ideals and to the ongoing genius of American medicine.

I felt--passionately--that it was time to decipher the message inherent in that disparity. In order to unravel the complex picture provided by our data and experience, I established a Secretarial Task Force whose broad assignment was the comprehensive investigation of the health problems of Blacks, Native Americans, Hispanics and Asian/Pacific Islanders.

The Task Force under the insightful direction of the distinguished Thomas E. Malone, Ph.D., Deputy Director of the National Institutes of Health and with the invaluable contribution of experts from throughout the department, has met its challenge. Brilliantly. First: by a review of departmental programs to determine how the health problems of minorities have been addressed; followed by a careful analysis of the range of health care resources and information available; and then--by a critique of the health status of Blacks, Native Americans, Hispanics and Asian/Pacific Islanders. The Task Force was further charged with finding ways for our department to exert leadership, influence and initiative to close the existing gap. The report is comprehensive. Its analysis is thoughtful. Its thrust is masterful. It sets the framework for meeting the challenge--for improving the health of minorities.

It can--it should--mark the beginning of the end of the health disparity that has, for so long, cast a shadow on the otherwise splendid American track record of ever improving health.

Margaret M. Heckler

Margaret M. Heckler
Secretary

TABLES AND FIGURES

TABLES

FIGURES

INTRODUCTION AND OVERVIEW OF THE TASK FORCE ON BLACK AND MINORITY HEALTH

Perspective of the Task Force Study

Despite the unprecedented explosion in scientific knowledge and the phenomenal capacity of medicine to diagnose, treat, and cure disease, Blacks, Hispanics, Native Americans, and those of Asian/Pacific Islander heritage have not benefited fully or equitably from the fruits of science or from those systems responsible for translating and using health sciences technology. With full cognizance of this tragic dilemma in the United States, the Secretary of Health and Human Services, Margaret Heckler, established the Task Force on Black and Minority Health.

Since the turn of the century, the overall health status of all Americans has improved greatly. In 1900, the life expectancy for the United States population at birth was 47.3 years; for Blacks it was much lower--33 years. In little more than three generations, remarkable changes have occurred in health care and biomedical research. As pointed out by the Surgeon General in the 1979 report, Healthy People, the leading causes of death in 1900 were influenza, pneumonia, diphtheria, tuberculosis, and gastrointestinal infections. In the first half of the century, improved sanitation, better nutrition, and immunizations brought a drastic decline in infectious diseases. Today, these diseases cause a relatively small percentage of deaths compared to 1900.

Knowledge about life processes in health and disease is being acquired at an incredible pace. Because of one spectacular achievement after another, it is predicted that many of the diseases not now curable, will be controlled by the year 2000. This "biological revolution" has placed into the hands of health professionals effective medications, new and complex diagnostic instruments, and treatment modalities not dreamed of in 1900.

Since 1960, the United States population has experienced a steady decline in the overall death rate from all causes. Remarkable progress in understanding the causes and risks for developing diseases such as heart disease and cancer have important implications for the health of all Americans. The decline in cardiovascular disease mortality from 1968 to 1978 alone improved overall life expectancy by 1.6 years. Advances in the long-term management of chronic diseases mean that conditions such as hypertension and diabetes no longer necessarily lead to premature death and disability.

Concomitantly, advances in social and behavioral sciences research and methodology have elucidated relationships among biological, behavioral, and social factors that affect health and illness. The link among these factors is critical to understanding the behavioral underpinnings of health, identifying effective strategies for disease prevention, maintaining treatment regimens, and suggesting ways to change behavior for more healthful living habits.

Although tremendous strides have been made in improving the health and longevity of the American people, statistical trends show a persistent, distressing disparity in key health indicators among certain subgroups of the population. In 1983, life expectancy reached a new high of 75.2 years for Whites and 69.6 years for Blacks, a gap of 5.6 years. Nevertheless, Blacks today have a life expectancy already reached by Whites in the early 1950s, or a lag of about 30 years. Infant mortality rates have fallen steadily for several decades for both Blacks and Whites. In 1960, Blacks suffered 44.3 infant deaths for every 1,000 live births, roughly twice the rate for Whites, 22.9. Moreover, in 1981, Blacks suffered 20 infant deaths per 1,000 live births, still twice the White level of 10.5, but similar to the White rate of 1960.

The Task Force on Black and Minority Health was thus conceived in response to a national paradox of phenomenal scientific achievement and steady improvement in overall health status, while at the same time, persistent, significant health inequities exist for minority Americans. As the Task Force came into being in April 1984, it was evident that to bring the health of minorities to the level of all Americans, efforts of monumental proportions were needed.

Task Force Activities

Secretary Heckler appointed Dr. Thomas E. Malone, Deputy Director of the National Institutes of Health, the Government's chief agency for supporting biomedical research, as Chairperson of the Task Force. After careful review of programs and staff of the Department, 18 senior scientists and officials were selected as primary members of the Task Force. These individuals not only had expertise and experience in the areas proposed for study, but had the programmatic authority affording direct possibilities for implementing recommendations of the Task Force. The Task Force members and alternates are listed in the appendix to this volume. The Task Force was assured the necessary resources to carry out its mandate and was supported by a staff that included a wide range of health professionals and technical staff from throughout the Department of Health and Human Services (DHHS).

The Task Force on Black and Minority Health was a unique and historic assemblage in its own right. While DHHS has many programs that have significant impact on improving the health status of minorities, this was the first time that representatives of these programs were joined in a common effort to carry out a comprehensive and coordinated study to investigate the longstanding disparity in the health status of Blacks, Hispanics, Asian/Pacific Islanders, and Native Americans compared to the nonminority population.

The Task Force members developed a broad, multidimensional approach to characterizing the health problems of minority Americans. The approach was based on analyses of mortality data to define the extent of the health disparity, intense examination of the major health issues found in the analyses to explore why the disparity persists, and consultations with experts in minority health issues from the non-Federal community.

The findings and recommendations generated by the Task Force within the confines of a little more than a year's time are summarized in this volume. More detailed information supporting the findings will appear in subsequent volumes.

Data Review and Analysis

In its initial meetings, the Task Force carefully reviewed existing health status information for minority and nonminority populations available in Health, United States, 1983 and other supplementary data sources. After analyzing national mortality data for more than 40 disease categories, the approach adopted by the Task Force that best defined the disparity was the statistical technique of "excess deaths"; that is, the difference between the number of deaths observed in minority populations and the number of deaths which would have been expected if the minority population had the same age and sex-specific death rate as the nonminority population. This method quantified the number of deaths that would not have occurred had mortality rates for minorities equalled those of nonminorities.

Because of the paucity of data relating to the health needs and mortality of Asian/Pacific Islanders and Hispanics in the United States, the Task Force assembled an Asian/Pacific Islander advisory group and an Hispanic advisory group. Each group provided the Task Force with data and other information on health problems within the diverse ethnic groups that make up the aggregate population and initiated special data reviews to supplement inadequate national information.

Native Americans include American Indians, Alaska Natives, and Native Hawaiians. Most statistics cited in this report, however, refer specifically to American Indians and Alaska Natives. Where data on Native Hawaiians are available, they are treated separately.

Identifying the Major Contributors to the Disparity

In analyzing mortality data from 1979 to 1981, the Task Force identified six causes of death that together account for more than 80 percent of the mortality observed among Blacks and other minority groups in excess of that in the White population. Although the ranking of health problems according to excess deaths differs for each minority population, the six health problems became priority issue areas for Task Force study. Listed in alphabetical order, they are:

- Cancer
- Cardiovascular disease and stroke
- Chemical dependency, measured by deaths due to cirrhosis
- Diabetes
- Homicide and accidents (unintentional injuries)
- Infant mortality

Table 1 presents the leading causes of excess mortality and the percentage that each cause contributed to the total excess deaths in Blacks for the years 1979 to 1981. For Black males and females combined, excess deaths accounted for 47 percent of the total annual deaths in those 45 years old or less, and for 42 percent of deaths in those aged 70 years or less. More detailed analyses of excess mortality appear in the section "Mortality and Morbidity Indicators."

In addition to measures of excess deaths, special analyses of morbidity and health status indicators for minorities were developed by the Task Force. These indices included prevalence rates of selected chronic and infectious diseases, hospital admissions, physician visits, limitation of activity, and self-assessed health status. Prevalence of arthritis, digestive diseases, dental problems, and respiratory disease among minorities is poorly documented and data were virtually unavailable. Additional mortality indices included person-years of life lost, life expectancy, and relative risk of death by cause. A summary of these findings is included in the section entitled "Mortality and Morbidity Indicators."

Some factors contributing to minority health status are not disease-specific but have bearing on the overall health needs of each minority group. Among those that the Task Force reviewed are demographic data characterizing the four minority groups, minority needs in health education, health professionals, and health care services and financing. A summary of issues that cut across health problem areas appears in the sections of this report entitled "Social Characteristics of Minority Populations" and "Health Services and Resources for Minorities."

Subcommittee Activity

For each of the six causes of death identified as a priority area, a Subcommittee was formed to explore why and to what extent the disparity exists and what DHHS can do to reduce it. The Subcommittees were charged with investigating the physiological, cultural, and societal factors that, in combination, perpetuate health inequities for minorities. They sought to understand the etiology of selected conditions for different minority groups, explore potential means for improving the effectiveness of treatment, and identify possible intervention strategies to prevent excess death and injury in minority groups. Because of the differences among minority groups, the Subcommittees addressed each issue with special attention to the cultural milieu of that population group.

Table 1

Average Annual Total and Excess Deaths in Blacks Selected Causes of Mortality, United States, 1979-1981

	Excess Deaths Males and Females Cumulative to Age 45		Excess Deaths Males and Females Cumulative to Age 70	
	Number	Percent	Number	Percent
Causes of Excess Death				
Heart Disease and Stroke	3,312	14.4	18,181	30.8
Homicide and Accidents	8,041	35.1	10,909	18.5
Cancer	874	3.8	8,118	13.8
Infant Mortality	6,178	26.9	6,178	10.5
Cirrhosis	1,121	4.9	2,154	3.7
Diabetes	223	1.0	1,850	3.1
Subtotal	19,749	86.1	47,390	80.4
All Other Causes	3,187	13.9	11,552	19.6
Total Excess Deaths	22,936	100.0	58,942	100.0
Total Deaths, All Causes	48,323		138,635	
Ratio of Excess Deaths to Total Deaths	47.4%		42.5%	
Percent Contribution of Six Causes to Excess Death	86.1%		80.4%	

The Subcommittees reviewed existing data and literature and consulted with experts and organizations within and outside the Federal government. When scientific information for a particular issue was not readily available, research papers were commissioned to review recent data in each Subcommittee's area. Material from most of the commissioned papers was incorporated into the Subcommittee reports. Many of the authors contributed new analyses that augmented national information already available to the Task Force.

Interaction With the Non-Federal Community

In order to supplement its knowledge of minority health issues, the Task Force had extensive interaction with individuals and organizations outside the Federal system.

Presentations. The Task Force and its Subcommittees heard presentations by experts in several issue areas. Presentations included public health aspects of homicide and homicide prevention; special problems concerning the health status of Asian/Pacific Islanders, and American Indians and Alaska Natives; the political history, demography, and health-related conditions of Hispanics; and the use of traditional folk medicine and healers by various minority groups.

Outreach. Task Force members and staff attended national meetings of non-Federal professional organizations to inform their membership of the work of the Task Force and to solicit their views on health priorities and model intervention programs.

Non-Federal community survey. The Task Force surveyed more than 350 non-Federal organizations and individuals concerned with minority health issues. The survey requested opinions about critical factors affecting the health status of minorities, and requested examples of successful programs and suggestions for ways that DHHS might better address minority health needs. This survey may help to initiate cooperative efforts between the Federal and private sectors for improving minority health. A summary of the survey results appears in the section of this report entitled "Survey of Non-Federal Organizations."

Program Inventory

The Task Force conducted an inventory of health care, research, and prevention programs sponsored by DHHS that specifically affect minority populations. The inventory of DHHS programs and projects is the first such compilation describing existing programs oriented toward minority health in DHHS. An index to the inventory is found in the section "Inventory of DHHS Program Efforts in Minority Health."

Task Force Report

The first volume of the Task Force Report summarizes the information and data compiled on specific minority health problems, special reports developed on cross-cutting minority health issues, and recommendations proposing activities for a coordinated effort by which DHHS may redirect its resources to address the demonstrated disparity in health status between minority and nonminority populations. For greater understanding of the urgency and complexity of the issues around which the recommendations were developed, all sections of the report should be examined.

Subsequent volumes of the report contain the complete text prepared by the Subcommittees that support their findings and proposed intervention strategies. They are excellent reviews of research and should be regarded as state-of-the-art information on specific problem areas in minority health. Subsequent volumes also contain the complete inventory of DHHS programs and projects that benefit minorities, and an annotated bibliography listing selected topics related to Hispanic health issues.

The report of the Task Force looks to the future. It concentrates on specialized activities that should have a direct and timely impact on the problems of minority health. Apart from the descriptions of DHHS programs referenced in the program inventory, the report does not analyze or examine the many departmental activities and services that benefit all Americans, including minorities, such as the extraordinary advances in biotechnology and molecular biology.

In compiling its data, the Task Force tapped a broad range of sources. Much information is based on the data systems of the National Center for Health Statistics. Some data resulted from special analyses conducted for the Task Force or studies from other sources. Data comparisons are generally made between minority and nonminority groups except in those situations where study data specified White populations or aggregate (all races) populations. Because the report was assembled during a year's time, more recent data on some topics may now be available.

Context for the Task Force Recommendations

The Task Force acknowledged that the factors responsible for the health disparity are complex and defy simplistic solutions. Health status is influenced by the interaction of physiological, cultural, psychological, and societal factors that are poorly understood for the general population and even less so for minorities.

Even though the shared characteristic of economic disadvantage among minorities suggests the possibilities of common approaches for achieving improved health, diversity within and among minorities necessitates activities, programs, and data collection tailored to meet their health needs. The Task Force further observed that since minorities are underrepresented as beneficiaries of the predominantly nonminority health care establishment, efforts by all sectors must proceed vigorously in areas in which current knowledge can suggest action.

Recommendations were developed to emphasize the following principles: incorporate minority health initiatives into existing DHHS program areas in order to address health conditions amenable to immediate improvement, press for greater public and private involvement in a common effort to eliminate the health disparity, resolve unanswered questions through a concerted program of research and data collection, and seek new strategies to ameliorate health inequities between minorities and nonminorities.

In the context of these general observations and with information obtained from a broad range of experts in the field and its own deliberations, the Task Force began the long and arduous recommendation development process.

Early in the process, the Task Force recognized that many activities of major importance to minority groups were already in progress within DHHS. Therefore, the Task Force decided to emphasize new directions for departmental activities in its efforts to reduce the minority health disparity. Many of these activities are indicated within the recommendations that follow. The Subcommittees, however, proposed many other opportunities that relate more specifically to the health priority areas. They appear in the Subcommittee reports as "Opportunities for Progress." The reader is urged to consider them as extensions of the recommendations.

The recommendations are organized into six categories. They emphasize areas in which the Task Force members believe further improvements were urgently needed. The categories are:

- Health information and education
- Delivering and financing health services
- Health professions' development
- Cooperative efforts with the non-Federal sector
- Data development
- Research agenda

The Task Force joins with all concerned citizens in acknowledging the stark reality of the continuing, significant differences between the health of racial/ethnic minorities in the United States and the general population and proposes recommendations for DHHS and others in the public health community to address these problems.

Recommendations of the Task Force

HEALTH INFORMATION AND EDUCATION

Introduction

The ability to make informed decisions plays a significant role in influencing the overall health status of Americans. Though not a panacea, health education has been effective in increasing public awareness about actions individuals and communities can take to enhance personal health. The disparity in the death rate between nonminority and minority populations in the United States (Blacks, Hispanics, Asian/Pacific Islanders, and Native Americans) is a compelling reason to investigate how health education can contribute toward reducing this disparity. Because many of the identified behavioral and environmental risk factors associated with the causes of excess deaths among minorities can be controlled, more work is needed to educate minority populations about the risk factors for the six areas identified as having the greatest impact on minority health: cancer; cardiovascular disease; chemical dependency; diabetes; homicide, suicide, and unintentional injuries; and infant mortality.

RECOMMENDATION 1: AN OUTREACH CAMPAIGN

The Department should launch an outreach campaign to disseminate health information and education materials and program strategies specifically designed for minority sectors of the population, including Blacks, Hispanics, Asian/Pacific Islanders, and Native Americans. The campaign should strengthen and expand present departmental health promotion efforts emphasizing preventive aspects of those public health areas identified by the Task Force which have the greatest impact on death and disability among minority populations: cancer; cardiovascular disease; chemical dependency; diabetes; homicide, suicide, and unintentional injuries; and infant mortality.

Access to Health Information

The Task Force has reviewed data suggesting that minority populations may be less knowledgeable or aware about some specific health problem areas than nonminorities. This situation is particularly critical in those areas where minorities suffer a greater burden of illness than nonminorities. For example, Blacks and Hispanics have less information about cancer and heart disease than do nonminority groups:

- Blacks tend to underestimate the prevalence of cancer, give less credence to the warning signs, get fewer screening tests, and are diagnosed at later stages of cancer than nonminorities.

- Hispanic women have less information about breast cancer than do nonminority women. Hispanic women were less aware that family history is a risk factor for breast cancer, and only 25 percent of Hispanic women have heard of breast self-examination.

- Many professionals and lay persons, both minority and nonminority, do not know that heart disease may be as common in Black men as in nonminority men or that Black women die from coronary disease at a higher rate than nonminority women. Hypertensive Japanese women and younger men (18 to 49) are less aware of their hypertension than are the nonminority subgroups, according to a 1979 survey. Among Mexican Americans, cultural attitudes regarding obesity and diet are often barriers to achieving weight control.

Programs to increase public awareness about health problems have been well received in several areas. For example, the Healthy Mothers/Healthy Babies Coalition, which provides an education program in both English and Spanish, has contributed to increased awareness of measures to improve health status of mothers and infants. Also, increased knowledge among Blacks of hypertension as a serious health threat is one of the accomplishments of the National High Blood Pressure Education Program. The success of these efforts indicates that carefully planned programs have a beneficial health effect; but the job is not complete and efforts must continue.

Planning Health Information

Sensitivity to cultural factors is often lacking in health care of minorities. Although DHHS has considered cultural orientation in many of its health information programs, improvement is needed. Experience has shown that key concepts to consider in designing a health information campaign include: meeting the language and cultural needs of each identified minority group, using minority-specific community resources for tailoring educational approaches, and developing materials and methods of presentation commensurate with the educational level of the target population. Furthermore, because of the powerful influences of cultural factors over a lifetime in shaping people's attitudes toward health behaviors, health information programs must be sustained over a long period of time. Examples of how these concepts might be interwoven into health promotion efforts follow.

- Channel efforts for Black, Hispanic, Asian/Pacific Islander, and Native American communities through local leaders, who could represent a powerful force for promoting acceptance and reinforcment of the central themes of health promotion messages.

- Data suggest that health messages are more readily accepted if they do not conflict with existing cultural beliefs. Where appropriate, messages should acknowledge existing cultural beliefs.

- Involve family, churches, employers, and community organizations as a support system to facilitate and sustain behavior change to a more healthful lifestyle. For example, although hypertension control in Blacks depends on appropriate medical therapy, blood pressure control can be improved and maintained by family and community support of activities such as proper diet and exercise.

- Language barriers, cultural differences, and lack of adequate information on access to care complicate prenatal care for Hispanic and Asian women who have recently arrived in this country. A model program in Hartford, Connecticut, uses volunteer minority lay health workers to organize community support networks to promote perinatal care by disseminating culturally appropriate health information to Hispanic women.

- Homicide is the leading cause of death for young Black men and one of the leading causes of death for Hispanic men and Black women. It is a major contributor to the disparity in mortality rates between these groups and nonminorities. Homicide prevention activities should include strategies such as behavioral modification interventions for handling anger and community-based programs that call attention to the extent and consequences of violence in Black and Hispanic communities.

- Task Force data suggest that the health of some young Hispanic and Native Americans may be seriously threatened by the emerging use of inhalants. Communities where young people are at risk because of increasing use of such substances would benefit from an appropriate and culturally sensitive health education campaign to address this problem at the community level.

DEPARTMENTAL ACTIVITIES

In carrying out an outreach campaign to meet the health information needs of minority populations, DHHS should initiate the following activities:

- Assess existing departmental materials to ascertain whether health information materials available to minority populations are sensitive to their culture and appropriate to their language and reading level. Reorient existing health information materials as necessary.

- Review the accessibility of health information and educational materials available to identified minority populations.

- Develop new health information and educational materials, suitable for specific minority groups, where none already exist. New materials should be formulated to be acceptable to the cultural and language needs of each targeted population.

- Develop media-based messages in different languages at appropriate reading levels, including culturally relevant verbal and print messages, to increase awareness and provide knowledge of health issues, and promote behavior change to a more healthful lifestyle.

- Test improved or new materials before general distribution to determine if the materials are both culturally acceptable and useful to the target audience.

- Enlist the participation and counsel of professional and lay members of each minority group to assess the suitability of existing departmental health information materials, reorient materials to specific minority groups, develop new materials, and distribute the materials through the appropriate minority-specific networks.

- Encourage private organizations such as religious and community organizations, clubs, and schools, to participate in developing minority support networks and other incentive techniques to facilitate the acceptance of health information and education.

- Emphasize information and educational materials in those areas where the health problems are identified as most severe, the target population is at highest risk, and interventions are likely to result in improved health status.

- Distribute health information through the established communication networks, public and private, within minority communities.

- Evaluate the impact of these efforts on health-related behavior and, where appropriate, on morbidity and mortality.

Patient Education

The benefits of health education for overall health promotion require a relatively long period of time to be realized. Patient education is a component of health education that requires a much shorter time for its benefits to be observed. Patient education includes increasing a person's knowledge about identified health problems and strengthening the ability to care for that condition.

Knowledge of appropriate self-care, treatment regimens, or beneficial behavioral changes can influence an individual's health status significantly and alter the probability of adverse health outcomes.

RECOMMENDATION 2: PATIENT EDUCATION

The Department should ensure that its materials, programs, and technical assistance for patient education are responsive to minority population needs, especially those provided in specific health care service settings such as medical, community-based, school and worksite locations. Emphasis should be given to those public health topics that have the greatest impact on death and disability in minority populations. Concomitantly, attention should be given by the Nation's schools and universities to training health care providers and educators to be sensitive to minority cultural and language needs.

Patient Education Is Interpersonal

Patient education is often linked to the delivery of medical care or a specific health problem and frequently takes place in special settings, such as hospitals, schools, communities, homes, or the worksite. Although printed materials and information contribute to the educational process, patient education is inherently interpersonal. The success of the educational effort is often determined by the credibility of the source of patient education and is highly dependent on the skill and sensitivity of the health care provider.

Task Force data suggest that physicians, often seen in clinics or emergency rooms, are the primary source of health information for Black and Mexican American patients. In addition, Mexican Americans regularly seek advice from family members on health matters. American Indians and Alaska Natives living on reservations rely on Public Health Service health practitioners or community health representatives for information. Some Asian/Pacific Islanders may use traditional healers in combination with physicians. These differences among the minority groups need to be given due recognition in the design and delivery of patient education services.

Patient education programs are particularly critical and needed for several health problems where the impact on minority health is greatest, such as hypertension, obesity, and diabetes.

Patient Education Is Cost Effective

Task Force data suggest that patient education is effective in reducing the cost of health care. For diabetics, it has been estimated that improving self-management skills through education could reduce the complications of diabetes--ketoacidosis, blindness, and amputations--by up to 70 percent, preventing about 50,000 hospitalizations a year.

Costs for prenatal education of pregnant women fall far short of the estimated $15,000 required for medical services for each low birth weight infant.

Hospitals in Memphis and Atlanta have had projects lasting more than a decade that offered prevention-oriented education programs geared to early detection, therapy, and continuing follow-up care for diabetics, on the assumption that prevention is effective both in therapeutic effects and in cost. The results have supported this assumption. The Atlanta program has saved an estimated $11 million in costs, and the Memphis program, similarly cost effective, has seen reductions in hospitalizations and diabetic complications. Given the high prevalence of diabetes among Blacks, Hispanics, American Indians, and some Asians, the potential for further savings in dollars and suffering is considerable.

DEPARTMENTAL ACTIVITIES

Departmental activities to ensure that patient education materials and programs are available and suitable to specific minority groups should include the following recommendations:

- Review and assess existing patient education materials, messages, and media in the Department to determine their applicability and suitability to specific minority groups. Minority group representatives should participate in planning and evaluating the appropriateness of materials, messages, and media addressing the major health problems confronting the minorities.

- Develop new patient education materials, messages, and media as needed, tailored to the specific needs of minority populations and designed for use in specific health care settings.

- Encourage health professions' training institutions to develop training programs so that health care providers such as physicians, dentists, nurses, social workers, health educators, lay counselors, allied health professionals, and volunteers may gain increased awareness of and sensitivity to the health problems and health attitudes, beliefs, and concerns of minority populations.

- Ensure that minority-specific patient education programs incorporate culturally relevant reasons why patients should comply with the necessary medical regimen. Mechanisms for involving minority organizations and disease-specific voluntary organizations should be explored.

DELIVERING AND FINANCING HEALTH SERVICES

Introduction

The Task Force has reviewed data that indicate low income and lack of health insurance coverage are among the most serious barriers to seeking health care. Minorities are disproportionately represented among impoverished Americans. The Department can serve as a catalyst to promote action by private and public entities to address these problem areas more effectively.

RECOMMENDATION 3: DELIVERY AND FINANCING OF HEALTH SERVICES

The Department should continue to investigate, develop, and implement innovative models for delivery and financing of health services, based on current departmental authorizations. The major objectives of the models should be to increase flexibility of health care delivery, facilitate access to services by minority populations, improve efficiency of service and payment systems, and modify services to be more culturally acceptable.

Traditional Measures of Health Care Services

The most commonly used indicators of the adequacy of health services for a population include distribution of physicians, percentage of a specified population who did *not* see a physician during the past year, and average number of visits to a physician. For these gross indicators, data are lacking for some minority groups.

These data do suggest that, in general, availability of health care professionals and utilization of health services for all Americans have increased:

- The rate of increase in the number of physicians in the United States has more than kept pace with the growth of the American population. During the period from 1970 to 1982, the American population grew by 11 percent, while the number of physicians grew by 51 percent. With the exception of Native Americans, most minority populations live in geographic areas where physicians are present. Little is known, however, about the practice patterns of medical specialists and the extent to which they treat minorities.

- In 1970, the percentage of people who had not seen a physician in the past 12 months was 30 percent for Whites and 42 percent for non-Whites (*). During the period from 1978 to

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* The Census definitions of White and non-White were used in 1970. People of Mexican or Spanish descent were coded "White," and Native Americans, Asian/Pacific Islanders, and Blacks were coded "non-White."

1980, these percentages were 23 percent for Whites, 24 percent for Blacks, 33 percent for Mexican Americans, and 20 to 24 percent for other Hispanic groups.

- In 1970, the average annual number of visits to a physician per year was 4.1 for Whites and 3.6 for non-Whites. During the period from 1978 to 1980, the average number of physician visits rose to 4.8 for Whites, 4.8 for Blacks, 4.3 for Mexican Americans, and from 5.1 to 6.1 for other Hispanic groups.

No absolute standards are available for measuring adequacy of health services. Data for nonminorities, however, provide a base against which to compare the use of health services by minorities. In sum, gross indicators of access to and utilization of health services show improvement for the Nation as a whole and for those minorities for whom data are available.

Traditional Measures Are Incomplete

The narrowing of the disparity in reported use of health services between minorities and nonminorities is an encouraging trend. The data, however, are lacking for many of the minorities. Moreover, the indicators themselves do not reflect delays between the onset of problems and the seeking of medical attention, severity of the problem when care is sought, quality of the care received, and whether appropriate referrals are made to specialists.

Information provided to the Task Force from a variety of non-Federal sources, including health professional and minority organizations, and the Tasks Force's professional judgment indicate problems relating to health services persist for minorities. The following exemplify such problems:

- The disparities in death rates between minorities and nonminorities remain despite overall increases in access and utilization that have been noted.

- Language problems hamper refugees and immigrants when they seek medical care and try to explain their symptoms to providers.

- Blacks with cancer tend to postpone seeking diagnosis of their symptoms longer than do nonminorities, and delay initiation of treatment once diagnosed.

- A smaller proportion of Black women than White women begin prenatal care in the first trimester of pregnancy (63 percent versus 76 percent in 1980), a factor related to the high Black infant mortality rate. The 1990 health objective for prenatal care states that a minimum of 90 percent of mothers in any racial or ethnic group should begin care in the first trimester of pregnancy.

- The postneonatal death rate, which constitutes the bulk of infant mortality for American Indians and Alaska Natives, remains high. Postneonatal mortality implies an adverse milieu for the infant and is thought to result from such problems as infectious diseases, unintentional injuries, and a lower use of health care for these acute problems.

Continuity of Care

Continuity of care is associated with improved health outcomes and is presumably greater when a patient is able to establish an ongoing relationship with a particular provider. The issue is central because many of the major killers of minorities, such as cancer, cardiovascular disease, and diabetes, are chronic rather than acute problems and require repeated visits and extended treatment regimens.

- A higher percentage of Blacks and Hispanics than Whites report that they they have no usual source of medical care (20 and 19 percent versus 13 percent).

- Proportionately fewer Blacks and Hispanics than Whites report that they use a physician's office as their usual source of care (46 and 54 percent versus 70 percent).

- Proportionately twice as many Blacks and Hispanics than Whites report they use hospitals and health clinics as their usual source of medical care. In 1980, more than 25 percent of all visits to physicians made by Blacks occurred in hospital clinics or emergency rooms compared to 11 percent by Whites.

- Refugees are eligible for special refugee medical assistance during their first 18 months in this country. After this, however, refugees who cannot afford private health insurance and who are ineligible for Medicaid or state medical assistance may become medically indigent.

- Many American Indians and Alaska Natives live in areas where the availability of physicians is half the national average, and the Indian Health Service may not be able to provide coverage.

Financing Problems

Many of the minorities tend to rely on Medicaid and charity care for their medical treatment because they have no other sources of care or ways to finance that care. Elderly minority people are less likely than Whites to supplement Medicare with additional private insurance.

- Proportionately three times as many Native Americans, Blacks, Hispanics, and certain Asian/Pacific Islander groups as nonminorities are impoverished (29 percent to 35 percent versus 11 percent).

- Proportionately twice as many Blacks and three times as many Hispanics as nonminorities have no medical insurance whatsoever (18 percent and 26 percent versus 9 percent).

- Of those who had no insurance, 35 percent did not see a physician during the past 12 months compared to 22 percent for those who did have insurance.

The problem of how to apportion fairly the costs associated with uncompensated hospital care is a major concern. The traditional practice of paying for this care through increased charges to other individuals and third party payers has become increasingly unacceptable as price competition among hospitals has heightened.

Public and private, not-for-profit, inner city hospitals bear the greatest share of the uncompensated care burden and are not likely to offset these expenses by attracting more paying patients. Unless solutions to the uncompensated care problem are found, the financial viability of these institutions may be in doubt. Access to health care is predicated upon the ability of both individual providers and institutions to meet the needs of the populations they serve.

Many States are now exploring the issue of uncompensated care through task forces or commissioned studies.

The composition of each State's medically indigent population varies according to its employment patterns, degree of unionization, structure of its Medicaid program, and other factors which differ among States. It is important, therefore, to encourage the States to undertake their own data collection efforts to define their medically indigent populations and devise policy initiatives that meet their particular needs. The DHHS can provide a clearinghouse function in these endeavors by providing baseline information, making available the results of other States' inquiries and initiatives, and providing technical assistance on questions of methodology.

Implications of Diversity

America is rich in the diversity of its minorities. There are more than 500 federally recognized American Indian tribes, 23 different countries of origin for Asian/Pacific Islanders, and three major places of origin for Hispanics. This diversity among populations is reflected in language difficulties, in cultural practices and beliefs with respect to illness and health, in differences in their birth rates, in differences in the afflictions which kill them, and in differences in their needs for types of services and the duration of health care.

DEPARTMENTAL ACTIVITIES

The following activities should be pursued by the Department in the area of delivering and financing health services.

- Serve as a resource to States as they study the problem of health care for the medically indigent. Encourage States to include consideration of minority subgroups in their research. Place a particular focus on the employed uninsured.

- Evaluate the changes taking place in the health care environment to assess their effect on uncompensated care and, in particular, on public hospitals. Resulting actions could lead, for example, to the formation of risk or revenue pools by the States.

- Emphasize prevention and primary care and promote, through existing program authorities, the concept of community-oriented primary care in those areas where problems of access appear to predominate.

- Target Federal categorical initiatives to trouble spots identified through the mid-course review of progress toward the 1990 Health Promotion/Disease Prevention objectives.

- Continue and expand the Department's participation in the Healthy Mothers/Healthy Babies Coalition, which has proven successful in addressing the issue of prenatal and perinatal care for low income women.

- Expand prenatal care Medicaid benefits, within existing program authorities, for high-risk pregnant women to include: nutrition supplements, psychosocial and health education classes, birth education classes, prenatal vitamins, and other health care upon authorization by the woman's physician.

- Use the established communication networks of organizations within minority communities as conduits for the dissemination of information about health promotion, disease prevention, and the use of health services.

HEALTH PROFESSIONS DEVELOPMENT

Introduction

Health care professionals are essential to any program that aims to improve the health status of minorities, since they are the providers who assist in preventing illness and restoring health. The Task Force recognizes this centrality and believes the Department must forge a partnership with the health professions' community and others to address jointly the health issues confronting minorities. The Task Force presents recommendations for developing health professionals both outside and within the Federal Government.

RECOMMENDATION 4: DEVELOPING STRATEGIES OUTSIDE THE FEDERAL SECTOR

The Department should initiate discussions with minority and nonminority health professional organizations, academic institutions, State governments and health departments, and other entities from the public and private sectors, to develop strategies to improve the availability and accessibility of health professionals to minority communities.

Considerations for Discussion

Analyses of data on the availability of health professionals have provided some insight into the issue of the persistent disparity in the health status of minorities. Several factors, however, require further investigation concerning minority and nonminority health professionals and their roles in minority communities.

- Minorities (and nonminorities) live in communities that do not generally conform to the specific geographic boundaries of political jurisdictions (states, counties, wards, districts, etc.). Minority communities are not evenly distributed and frequently cross over these geographic boundaries. In contrast, record-keeping and other processes for monitoring (and potentially influencing) the availability of health professionals and resources are generally determined by and restricted to these political boundaries.

- The size of a minority group, number of cultural subgroups, and demographic features such as pattern and distribution of minority communities are factors that influence the number of health professions' students that each group might be expected to generate and the degree to which a minority group can support a cadre of health professionals in their communities. With few exceptions, minorities are underrepresented as students and practitioners of the health professions. For example, the percentage of Blacks (11.5 percent of the population) in medical schools has decreased from a high of 6.3 percent (1974-75) to 5.5 percent (1983-84).

- Differences in the availability of health personnel resources to minority communities are apparent regardless of the minority group being considered. Communities located in urban/metropolitan counties appear to have significantly more professional resources available. Some of these professionals, however, are committed as faculty, administrators, and researchers, thus making their patient care contributions difficult to evaluate. The aggregate number of health professionals in cities overstate the actual availability of practitioners for patient care.

- The availability and accessibility of health personnel are separate but related issues. The first is a critical initial measure of resource potential, but is not an effective measure of health care capability unless the latter is also considered. Both of these critical issues must be addressed in planning for the future.

In addition to these considerations, increasing health personnel resources must involve interaction among the several groups that influence the health professions. Most of the health disciplines which collect data on their professional members do so on a national basis. Licensure of practitioners is accomplished at the State level, while accreditation of training institutions and certification of many allied health professionals is done by national and State bodies. Interests should be discussed and coordinated between those who influence the numbers and types of health personnel and those who wish to increase the numbers of health professionals in specific geographic areas.

Data on the participation of each minority group and subgroup in the various health professions is a prerequisite to determining how these personnel contribute to improving the health status of minority communities. Data on students are more readily available than data on practitioners, but even these are not available for many health disciplines and/or for many minority subgroups.

DEPARTMENTAL ACTIVITIES

The following activities recommended for DHHS would provide a mechanism for sharing the Task Force's findings with the health professions' community, and concurrently provide a forum for dialogue between interested and involved parties at all levels. Discussions with the non-Federal sector should:

- Provide for a better integrated system for the collection and analysis of data on: the numbers of health professionals providing health care within minority communities; the practice patterns and demographic features of providers who serve these communities; and the numbers of minority health professional students in training by discipline.

- Identify implementation strategies to address critical health professions' educational issues, such as: increasing minority participation in the various training areas; strengthening training program curricula by making them more culturally sensitive to minority patients and minority health problems as identified in this report; and providing continuing education programs for training on minority health issues.

Activities Within the Federal Government

Development of a partnership for action with health professionals outside the Federal Government should be supplemented with coordinated action within the Federal Government. The Federal Government maintains a substantial health professions' resource within the Department and other elements of the Executive Branch. This resource can and should be provided with the findings of this report so that a cohesive approach may be developed with respect to the availability and accessibility of health professionals to minority communities.

RECOMMENDATION 5: DEVELOPING STRATEGIES WITHIN THE FEDERAL SECTOR

The Department should conduct both intra- and interdepartmental reviews to identify and provide for collaboration between the various activities currently being supported within the Department and other elements of the Executive Branch, respectively. The reviews should focus on programs that have impact on the actual or potential availability of health professionals to minority communities.

Coordinated Effort

The Federal Government maintains a substantial health professions resource. For example, it employs more than 18,000 physicians engaged in a variety of activities which affect the health care of the Nation. Within DHHS, the Public Health Service supports a number of programs designed to address shortages of minority health professionals (as practitioners and researchers) and place health professionals in medically underserved areas. These resources should not duplicate actions taken by other entities within DHHS or by other Federal agencies.

DEPARTMENTAL ACTIVITIES

As part of the proposed reviews, discussions and dialogue between responsible program officials should be stimulated to enhance DHHS ability to address the persistent problems of providing health professionals for underserved minority communities. Examples of activities which DHHS could undertake follow:

- Sponsor a series of conferences, directed toward practitioners, to promote the findings of this report and to develop health education and health promotion techniques for minority populations. The seminars should be made available to those practitioners within the National Health Service Corps, the Indian Health Service, and practitioners working under DHHS grants, to identify areas where the impact of their respective resources on minority communities might be enhanced.

- Encourage other Departments and agencies of the Executive Branch, especially the Veterans' Administration, to conduct training seminars on health education and health promotion techniques for minority populations. The seminars should foster interdepartmental support to improve the health of minorities.

- Collaborate with other agencies in the Executive Branch, such as the Department of Education, the National Science Foundation, and others, to encourage more minority researchers to apply for Federal research grants, and to encourage more minority science faculty appointments to health and health-related training institutions. A model program that addresses the problem is the National Cancer Institute's Minority Investigator Supplement to Investigator Initiated Awards, which provides a means for entering into research grant programs and the opportunity to utilize the research skills of the minority investigator.

- Examine ways to increase minority representation in preventive medicine, public health, health education, communications, and other health professions.

COOPERATIVE EFFORTS WITH THE NON-FEDERAL SECTOR

Introduction

Activities to improve minority health cannot be confined solely to the Federal Government. The participation of organizations at all levels--National, State, municipal, and community--is vital to achieve improved health for minority individuals. State and municipal agencies are increasingly aware of the unique needs of their minority residents. Many localities, in fact, have developed plans to meet the national 1990 objectives for their health care needs.

The private sector can often be a very effective channel for programs targeted to minorities. National organizations concerned with minorities such as the National Urban League and the Coalition of Hispanic Mental Health and Human Services Organizations (COSSMHO) include health-related issues in their national agendas and are actively seeking effective ways to improve the health of minorities. Organizations such as these have a powerful potential for effecting change among their constituencies because they have strong community-level, "grass roots" support.

Changes in health behavior frequently depend on personal initiative and are most likely to be triggered by health promotion efforts originating from locally-based sources. Indeed, community involvement in developing health promotion activities can contribute to their success by giving credibility and visibility to the activities, and by facilitating their acceptance. By addressing health problems that occur within their own communities, minority residents can empower themselves to press more actively for adequate and comprehensive efforts aimed at improving the health of individuals and the community.

Not all minority communities, however, have the ability to identify their own health problems and initiate activities to address them. It is here that the Federal Government's knowledge and expertise in health can join with community and other non-Federal groups to strengthen minority-related health activities.

RECOMMENDATION 6: BUILD THE CAPACITY OF THE NON-FEDERAL SECTOR TO ADDRESS MINORITY HEALTH PROBLEMS

DHHS should increase its involvement with State, local, and community agencies and organizations to encourage efforts specifically oriented toward meeting minority health needs. Recognizing that communities have unique insights into their own health problems, DHHS should undertake activities to increase awareness by minority communities of the Federal ability to provide an overview of health problems and to provide technical assistance.

Through departmental efforts in assisting communities to define local health goals, objectives, and priorities, develop strategies for resolving health problems, and set action plans into operation, localities can build an internal capacity for meeting the health needs of local minority populations.

Overview Position of DHHS

The Federal Government, through DHHS, is in a unique position to serve as a knowledgeable resource to State and local agencies and to private health-related organizations. Through its efforts in data collection, surveillance of health indicators, research programs on specialized health topics, and delivery of model health services, DHHS retains a national overview of the health problems and demographic descriptors of minority populations in the United States. Examples of these resources include:

- National surveys of health status and health services utilization conducted by the National Center for Health Statistics (NCHS).
- Specialized survey research, such as the National Drug Abuse Survey conducted by the National Institute on Drug Abuse (NIDA), and the National Survey on Physical Violence in American Families funded by the National Institute of Mental Health (NIMH) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Both surveys are oversampling Blacks and Hispanics in their 1985 cycles.
- The research and surveillance role played by the Centers for Disease Control (CDC) in areas of infant mortality, homicide and suicide, and diabetes.
- Model information and educational programs in each of the six priority areas carried out by almost every agency.
- Demonstration programs, such as those sponsored by the National Institutes of Health (NIH) that introduce proven preventive and therapeutic regimens and health care delivery advances to the public.

Special community needs often can be identified very effectively at national and local levels by organizations concerned with specific minority subgroups. Plans for intervention will be stronger and more effective if they are initiated by groups that are familiar with a community's culture, traditions, and languages and that can mobilize local resources and networks for resolving particular health problems.

Some minority communities, however, do not have sufficient information to define their greatest health needs and to develop community strategies and constructive approaches for resolving these problems. Where it is fitting and appropriate, DHHS can provide states, municipalities, or communities with a national overview of their place within a larger context, and share the benefit of experience gained from programs that have proven successful in other localities. The Model Standards for Community Preventive Health Services project, a collaborative effort of CDC, the American Public Health Association, and associations of State, territorial, county, and city health officials, is a prime example of this kind of program activity.

Providing Technical Assistance

The Department can provide technical assistance to State and local health agencies, community-level organizations, business and industry, professional and voluntary health associations, and other private sector groups. Serving in a consultative or advisory role, DHHS experts can assist the states in addressing problems that lie within the state's jurisdiction (e.g., infant mortality, homicide, school health) by:

- Providing specific information to allow the health community to take prudent action.

- Identifying special health problems and needs.

- Organizing and planning minority-relevant intervention approaches.

- Suggesting mechanisms for implementing plans.

Cooperative Efforts

The following examples demonstrate ways the Department has worked with States, communities, and other organizations to build local capacity to meet health problems.

Technical Assistance to States. Upon request of State health authorities, the Low Birth Weight Prevention Work Group will send Infant Mortality Review Teams (IMR teams) to conduct geographically focused infant mortality reviews and investigate conditions associated with high or changing infant mortality. The IMR teams, composed of experts from the public and private sectors, serve as consultants and assist State health departments in gaining a better understanding of local difficulties in reducing infant mortality, in gathering precise information regarding local maternity and infant health care systems, and in developing strategies that will provide opportunities for ameliorating local problems.

Specialized Community Health Services. The On Lok Senior Health Services is a community-based, long-term care organization serving the frail elderly, many of whom are Asian. On Lok began as a federally funded research and demonstration project in 1972, and was able to assume its own financial responsibility by 1984. Services include hospitalization for acute conditions, a nursing home, a pharmacy, professional services (dentistry, optometry, podiatry, and other subspecialty medical services), home health services, nutrition programs, housing for the elderly, and transportation to medical care. Similar specialty services have been developed in other communities based on the On Lok model, such as women's health, substance abuse programs, and youth programs. The On Lok experience indicates that it may be more feasible to develop specialty services in a particular community rather than a more comprehensive health program.

Community Efforts. Results from research sponsored by DHHS are frequently disseminated to the general public or to target populations with the cooperation of national and local media, and community networks.

The National Cancer Institute launched a special cancer prevention awareness program for Black Americans.. It began with a mass media effort aimed at increasing awareness among Black citizens that everyone can do something to reduce the personal risk of cancer. The mass media effort will be followed by national and community-based educational activities that rely on strong involvement of traditionally Black organizations.

The National High Blood Pressure Education Program has worked successfully with communities, State and local health departments, industry, and professional and voluntary health organizations to increase health professionals' and the public's awareness about the risks associated with untreated hypertension and the opportunities for effective treatment.

The National Institute on Drug Abuse (NIDA) has encouraged Black organizations to incorporate drug and alcohol abuse prevention activities into their national agendas. NIDA has also provided guidance and support in the development and promotion of national multicultural networks among Black, Hispanic, Asian, and Native American families. One outcome is the development of a network among Black parents and community organizations to stimulate community-based prevention programs in drug and alcohol abuse. This model for a "grass roots" prevention program is being replicated in a select number of cities across the country.

Business and Industry. A number of agencies within DHHS provide technical assistance to individuals and organizations in business and industry. The Office of Disease Prevention and Health Promotion (ODPHP) is working with the Workplace Health Fund, a component of AFL-CIO, to develop worksite health promotion programs through unions. ODPHP also assists businesses in planning health promotion programs for the future by identifying trends that influence work and health.

The National Heart, Lung, and Blood Institute (NHLBI) cosponsored a conference with several major corporations to examine positive outcomes derived from worksite health promotion programs. NHLBI also developed the *Cardiovascular Primer for the Workplace* to assist private industry in developing cardiovascular risk reduction activities. At present, NHLBI is examining ways of working with small businesses to develop health promotion programs.

Health Care Settings. A leader in the field of preventive interventions for victims of domestic violence has been the Harborview Medical Center in Seattle. The Center developed a comprehensive intervention model that addresses the needs of victims of spouse abuse, child sexual abuse, rape, elder abuse, and assaults by strangers. A model emergency room protocol for identifying adult victims of domestic violence has been developed for hospitals in New York State and can be adapted for use elsewhere. Efforts based on these models need to be introduced and tested further in similar health care settings.

DEPARTMENTAL ACTIVITIES

Activities in which DHHS can take a leadership role in initiating cooperative efforts with the non-Federal sector to improve the long-term health status of minority groups include:

- Support development, testing, and dissemination of model programs suitable for minority community-based efforts for disease prevention and health promotion, especially in the six priority health areas.

- Provide technical assistance in the implementation of State and local prevention programs that focus on the special needs of minority populations.

- Increase collaborative efforts with State and local governments, professional associations, and health-related voluntary and private organizations, to develop their capacity to identify health objectives, set priorities, and implement strategies to improve the long-term health status of minority populations. This collaborative effort should include:

    --encouraging States to conduct reviews of their efforts to address the health needs of minority populations.

    --strengthening State, municipal, and local community capacities to develop prevention initiatives aimed at the high incidence of adverse health events such as drunk driving, family violence, and drug abuse.

    --advising States of Federal data on minorities relevant to their localities and encouraging the States to develop data on avoidable mortality by locality.

    --conducting forums through the PHS regional health offices where communities can present model health programs targeted to a particular minority health effort. A manual of these initiatives could serve as a resource to other communities seeking information on effective prevention programs and how to apply them in different communities.

--strengthening private and public efforts in addressing minority health issues by convening meetings of groups, such as leading private sector minority organizations, State health agency officers, major voluntary organizations, and professional organizations, to define specific minority health issues and to discuss mechanisms for dealing with them.

--encouraging organizations concerned with minority issues to develop and promote health education materials that are appropriate to the culture and the language of the minority groups they serve.

- Encourage the development of outreach programs that evaluate high-risk subsets of minority groups.

- Initiate meetings with other departments in the Executive Branch to address health problems of mutual interest oriented to building the capacities of local communities. Appropriate topics and agencies include:

--developing a combined strategy for prevention of homicide with the Department of Justice.

--improving housing and reducing environmental hazards for populations at high risk for injuries with the Department of Housing and Urban Development.

--coordinating smoking cessation programs and other health promotion programs under other Departments' sponsorship, such as the Departments of Defense and Education.

DATA DEVELOPMENT

Introduction

The Task Force believes that data issues are a major area for recommendations and suggests that more extensive minority health and illness data are needed to improve the information available to DHHS and the private sector for making program and policy decisions. Examples of why this is so include:

- National data on mortality rates for Hispanics are lacking.
- The accuracy with which ethnic group membership is described on death certificates, especially for Hispanics, is variable.
- Studies based on diabetes mortality rates in minorities fail to consider differences in incidence, age of onset, availability of medical care, education, socioeconomic status, and interaction with hypertension.
- Population-based cancer registries often lack comparability with information from the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) program.
- The incidence of sudden cardiac death in Blacks in relationship to coronary heart disease has been examined, but no firm conclusion is possible because of lack of data.

Reliable data are central to measuring progress in public health, and are the key to assessing the current health status of the Nation and measuring health status trends; recognizing both sources of and solutions to problems; identifying health disparities between segments of the population; and targeting efforts directly to specific needs.

The data available in the Task Force review and other reports have pointed to disparities in death rates, health status, and health care utilization between minorities and nonminorities, but more detailed data are needed to enhance our understanding of the processes underlying the disparity and to provide a better basis for rational program planning, implementing, and monitoring. The effort to obtain reliable data is especially challenging because minority populations are growing rapidly, changing rapidly, highly mobile, and, therefore, difficult to track yet have greater health problems than nonminorities.

RECOMMENDATION 7: IMPROVING AND FULLY USING AVAILABLE SOURCES OF DATA

DHHS should undertake activities, which would improve existing sources of health data, such as: enhancing cooperative efforts with the States in recording vital statistics, incorporating specific racial/ethnic identifiers in data bases, and oversampling selected *minorities in national surveys. Furthermore, DHHS should support innovative uses of currently available data consistent with the Privacy Act and confidentiality constraints. Analyses such as cross-comparisons from different data sets and specialized studies should be encouraged because they can contribute to understanding the health status and needs of minority populations.*

Steps to Better Understanding

Gaining better understanding and knowledge of the health of minority populations requires improving the collection of quantitative data on the incidence and prevalence of health problems in these populations. Analysis of health status data with specific minority identifiers will allow elucidation of relationships between factors that may be responsible for the disparity in death rates. For example, the Task Force has concluded that data on the incidence of chronic heart disease in Black populations are inadequate because relatively few studies include significant numbers of Blacks. Recognition of these needs has led to some efforts to obtain more data, such as the surveillance of chronic heart disease events in a predominantly Black community being performed under the sponsorship of NHLBI. Similarly, the Hispanic Health and Nutrition Examination Survey (HHANES) will advance knowledge of health and nutritional status among Americans of Mexican, Puerto Rican, and Cuban origin through special data collection efforts. Until this survey, data on the health status of Hispanics were limited to self-reports such as those compiled in the National Health Interview Survey (NHIS).

Sources of Health Data

DHHS receives health data on a variety of topics from a wide range of sources. Vital statistics data on births, deaths, marriages, and divorces are provided by the States to the National Center for Health Statistics (NCHS), the Nation's chief health data collection agency. NCHS also conducts national surveys based on samples that are representative of the total U.S. population. These surveys include NHIS, the National Health and Nutrition Examination Survey (NHANES), the National Ambulatory Medical Care Survey (NAMCS), the National Hospital Discharge Survey (NHDS), and other data collection activities that document the health characteristics of the United States population. Other data on health status and health care utilization are furnished by States and local sources to the Centers for Disease Control (CDC), to the Health Care Financing Administration (HCFA) through its Medicaid and Medicare programs, to the Social Security Administration (SSA), and to various programs within the Department that may be studying health problems within specific populations.

Problems with Existing Sources of Data

The data now collected by the Department comprise a useful base for health-related study and analysis. The Task Force, however, has identified a number of problems with existing data relating to the health of minorities.

One problem is the lack of common practices among the States in recording ethnicity identifiers in their reported data. Few States require a Hispanic identifier on death certificates, and the quality of the identifications that are made is variable. Furthermore, individuals who fill out death certificates may do so inadequately because of insufficient training and understanding of the importance and uses of the information.

When race and ethnicity are recorded in Federal data collection efforts or for administrative record keeping, the Office of Management and Budget (OMB) provides minimum requirements for the categories to be recorded. The Office of Federal Statistical Policy and Standards Directive Number 15 classifies race as: 1) American Indian or Alaska Native, 2) Asian or Pacific Islander, 3) Black, and 4) White. Ethnicity is defined as: 1) Hispanic origin, or 2) Not Hispanic origin.

Although these categories, as mandated, are too broad to permit delineation within subgroups, the greater difficulty is that many DHHS statistical files and data bases fall short of meeting even the OMB requirement, particularly administrative records, self-reported hospital forms, and some social security claims. Furthermore, some DHHS data bases that originally contained data specifying minority group status have aggregated that data into a category labeled "other", thus losing the racial/ethnic integrity of the data.

Another problem relates to data collected from national surveys. Current surveys provide a good indication of the health picture of the Nation as a whole, as they are designed to do, but only limited information is available from them for many minority populations. Surveys usually sample minorities in proportion to their presence in the U.S. population. More data exist on Blacks, as the largest minority group and, indeed, NCHS has data on Blacks going back to the 1960's, the earliest period for which tapes are available. Smaller groups, such as Native Americans or Asian/Pacific Islanders, are represented by far fewer households. National surveys may include too few minority individuals to permit reliable analyses of health data for a particular group.

The Task Force has concluded that inconsistencies in data collection practices among the States, such as inadequate recording of some ethnic identifiers, overaggregation of minority data, and insufficient representation of minorities in national surveys are areas needing improvement.

Strategies for Improving Data

Two strategies for improving data on minorities are oversampling and targeted studies. Both approaches have advantages and disadvantages that need to be weighed when planning data collection efforts.

Oversampling of minorities offers the advantages of improving the precision of the data and allowing comparison with other groups for which data were collected contemporaneously. Oversampling in national surveys, however, presents the problem of developing valid and reliable procedures to select a randomized, representative sample of minorities. Moreover, additional costs are involved in oversampling in a national survey. Thus, there is a trade-off between costs and precision of information.

Another strategy for obtaining improved data is to mount targeted studies of specific minority populations or geographical areas. This technique would enhance knowledge of an identified group without the cost and difficulty of a national sample. By virtue of their targeted focus, however, such studies yield data that may not necessarily be comparable to other populations. Thus, careful planning is necessary to ensure that meaningful comparisons can be made.

The choice of sampling strategy is influenced by the issue being addressed, the needed degree of oversampling and its attendant costs and complexity, the geographic concentration of minority groups, and other considerations. Although oversampling or targeted studies may correct deficiencies in national surveys, the technique selected must be tailored to the particular data-gathering effort.

Using Existing Data

Many agencies in DHHS and other Federal Departments routinely collect information for administrative and other programmatic purposes that may contain health or ethnic identifying data. Presently, legislative restrictions that protect the privacy of individuals prohibit the exchange of administrative data for statistical research purposes. A solution to this dilemma is to establish conditions for the greater linkage of records among agencies to be used only for statistical research purposes. The rights of individuals to privacy, however, must be protected. Record linkage is one effective way to obtain needed information on small populations without great cost.

Record linkage has been supported consistently by DHHS in the past. Because of the tremendous wealth of information on minority health that could be gleaned from administrative records in this and other Departments, an appropriate resolution should be explored.

DEPARTMENTAL ACTIVITIES

To enhance the opportunities for more effective data collection relating to minorities in the United States, DHHS should pursue the following activities:

- Assign high priority to cooperative efforts between DHHS and the States directed at developing standardized Hispanic identifiers in vital statistics records (death, birth, marriage, and divorce certificates).
- Strengthen and expand efforts between the Department and the States to develop a national data base of linked birth and death records for analyzing infant mortality.
- Strengthen and expand cooperative efforts to train personnel to complete vital statistics records accurately (particularly with regard to correct coding of causes of death and racial/ethnic identifying items).
- Establish a mechanism to evaluate the quality of information on death certificates to determine if guidelines for completing the items on the certificate are followed.
- Require all DHHS agencies that collect health data from individuals to include race and ethnic identifiers, as defined by OMB. Where possible and desirable, further breakdown within racial and ethnic categories should be recorded, e.g., national origin of Hispanics and Asian/Pacific Islanders.
- Maintain specific racial/ethnic identifiers when processing original data. For those data collected cooperatively from the States by agencies such as CDC and NCHS, efforts should be increased to overcome barriers to obtaining data with standardized race/ethnicity identifiers.
- Oversample selected minorities in national surveys of health indicators or conduct targeted studies on minority health problems, as appropriate.
- Work with the Census Bureau to improve health-related, minority-specific data collection for the 1990 census.
- Analyze and highlight minority health issues, especially in the six health priority areas, that result from improved minority identifiers in data collection.

- Develop mechanisms for matching individual records from among government data sets, within and between Departments, for health and statistical research purposes. DHHS should encourage and support legislative changes to allow such matching to occur with the appropriate safeguards.

- Investigate, in the absence of legislation permitting data linkage across DHHS agencies, mechanisms whereby the minority-specific, health-related data collected by each agency can be analyzed and published.

RESEARCH AGENDA

Introduction

The Task Force has reviewed a considerable body of scientific knowledge related to the disparities in health status between minority and nonminority populations in the United States. It is evident that most of the disparity can be attributed to six areas identified as major contributors to excess mortality among minorities. Although the Task Force Subcommittees have explored physiological, cultural, and societal factors that may be responsible for the health disparity, many unanswered questions remain. Resolving these questions will require continued research and analysis to increase the base of scientific knowledge and to elucidate factors that put minorities at greater risk for illness and death.

The research activities recommended by the Task Force refer primarily to needed minority-specific health issues. The huge volume of ongoing research, particularly basic research already conducted through DHHS, applies to all populations, including minorities. Research into the etiology of diseases, treatment of diseases, and improved health service delivery will continue to benefit all Americans. The research proposed by the Task Force, however, is of major importance to minority health because it specifically aims at understanding the reasons underlying the longstanding disparity of health status in the United States. It offers the means to prevent or reduce much of the illness and death experienced by minorities in disproportion to their representation in the American population. The spectrum of suggested activities includes research into the etiology of diseases, research in behavioral and social sciences, clinical studies of treatment and treatment outcomes, research on the dynamics of health care and its impact on disease, and approproptiate interventions for disease prevention and health promotion.

The research agenda presents examples of priority areas for immediate investigation. The Subcommittee reports provide a rationale and fuller elaboration of the recommended research activities. By no means do they exhaust the range of activities needed for further research into minority health.

In addition to research into the reasons for the disparity, separate studies need to evaluate the impact of DHHS and other Federal programs on the health of minorities. Such studies are needed to coordinate departmental policies and programs, to identify areas where program efficiency can be improved and costs reduced, and to provide a measure of the extent to which policies and programs are achieving their objectives. Recognizing this, the Task Force includes evaluation studies as an integral part of the research agenda.

The Task Force suggests that each agency of DHHS review its portfolio of federally supported research and its applications for research funding to ensure that minority health issues are included.

RECOMMENDATION 8: RESEARCH AGENDA

The Department should adopt and foster a research agenda to investigate factors affecting minority health and should incorporate appropriate research activities on minority health into ongoing research programs consistent with the referral guidelines of each DHHS agency. The Task Force considers the following areas to be of major importance for research:

- *Risk factor identification*
- *Risk factor prevalence*
- *Health education interventions*
- *Preventive services interventions*
- *Treatment services*
- *Sociocultural factors and health outcomes*

DEPARTMENTAL ACTIVITIES

I. Research into Risk Factor Identification

Risk factors are the characteristics of individuals that are associated with the occurrence of health problems. Their identification is important to elucidate possible etiologic factors for a disease, to identify individuals or populations likely to experience health problems, to institute early preventive measures, and to identify groups on whom preventive or educational interventions can be concentrated.

More information is needed to clarify whether risk variables that contribute to the occurrence of disease in White populations contribute to disease differently in minority populations. For example, Black males have a higher prevalence of hypertension than Whites but experience a similar rate of mortality from coronary heart disease (CHD) as White males. Similarly, some Hispanic subgroups, specifically Mexican Americans, have a higher prevalence of diabetes, another risk factor for CHD, but exhibit lower mortality rates from CHD than Whites.

For the most part, identifying risk factors, defining risk status (whether a person is at high or low risk for a health problem), establishing risk profiles (distribution of risk status in a population), and following trends in risk patterns can be accomplished by well-designed epidemiologic studies. The impact of behavioral, physiological, and environmental factors also can be assessed in such studies.

Certain minority groups, such as second-generation Chinese, have a more favorable health status for certain conditions or have reduced all-cause mortality. Studies of populations at low risk for certain diseases also will add to understanding the relationship of risk factors to disease. DHHS activities to identify risk factors for the major health priority areas include:

- Identify and quantify, where possible, behavioral, physiological, and environmental risk factors for CHD, cancer, and diabetes in each minority group. Determine if the risk factors for CHD identified for White populations act similarly in the minority groups or if other risk factors, not yet identified, contribute to CHD in minority groups.

- Identify behavioral, physiological, and environmental characteristics of minority groups that place them at higher risk for any of the six health priority areas.

- Assess the impact of hypertension as a risk factor for morbidity and mortality in all minority groups.

- Identify the determinants of smoking behavior, cessation, and cessation maintenance in minority populations, particularly among pregnant minority women, Blacks, Hispanics, and Native Americans who may suffer the delayed effects of increasing rates of smoking.

- Determine the relationship of high rates of obesity found in Black females to their consequent excess mortality from CHD.

- Investigate the role of high-density lipoprotein (HDL) levels in influencing CHD outcome in Black and other minority males.

- Investigate links between dietary potassium and sodium intake (and other electrolytes) and hypertension in Blacks and other minorities.

- Study variables such as income, employment, school truancy, drug and alcohol problems, educational attainment, and accessibility of handguns as possible risk factors for homicide, particularly among Black and Hispanic males.

- Support improved studies of situational correlates of homicide and nonfatal assaults aimed at identifing high-risk situations for which preventive interventions are needed.

- Support studies on risk factors for deaths from unintentional injuries, suicide, and homicide among Native Americans and other minorities.

- Support studies on risk factors for suicide among Asian women, particularly those of age 45 and older.

- Investigate generational factors related to birthweight since the birthweight of the offspring appears to be correlated with the weight of the mother at her birth. Investigate racial/ethnic differences and socioeconomic resources related to differences in birthweight.

- Elucidate the role of physiological, social, psychological, and environmental stress on pregnancy outcome in different racial/ethnic groups, for example, the effects of unplanned pregnancy, unmarried status, low economic status, and employment in physically stressful jobs.

- Study the influence in Black women of nutrition as a risk factor for cancer, cardiovascular disease, and low-birthweight offspring.

- Conduct studies to understand dietary and exercise patterns more thoroughly in the four minority groups.

- Focus research efforts on the preventable causes of postneonatal mortality, including causes of accidental death. Research should encompass the interrelationship of individual and family behaviors, and health care delivery factors that influence the use of well and sick baby care, and immunization of babies.

- Initiate descriptive studies to identify occupational risks associated with the leading causes of death and disability in minority populations.

- Investigate minority status as a risk factor for safety in the workplace, including monitoring excessive exposure to contaminants from occupational sources and environmental pollution.

- Assess factors contributing to excess deaths due to cardiovascular disease in Native American men aged 35-39 years old.

II. Research into Risk Factor Prevalence

Disease patterns may be shared by an entire minority population, a subset of that population, a certain age group or gender, or geographic grouping of the minority population. Risk factor prevalence in such groups which share a health status trait warrant careful investigation, not only in cases where a clear disease burden is evident but also for diseases in which a subgroup displays better health. Activities to study risk factor prevalence for the major health priority areas should include:

- Continue to support large-scale, population-based prospective studies of coronary heart disease, similar to the Framingham studies and/or community-based studies for minority populations. Among the many Hispanic subgroups, Puerto Ricans and Cubans living in the United States have not been studied extensively and particularly warrant such research. Sudden death rates from CHD among Blacks need to be investigated by age and gender. Surveillance of the offspring of individuals studied is needed to understand coronary disease trends and to elucidate familial contributions to the incidence and disease process in these population groups.

- Study serum lipid levels, dietary risk reduction information, interventions, and behaviors for Puerto Rican, Cuban, and other Hispanic populations.
- Assess the relationship between dietary patterns in minority groups and the development of diabetes, cancer, and cardiovascular disease (CVD). Strengthen nutritional status surveillance of low income minority populations.
- Design epidemiologic studies to evaluate differences in the distribution of diabetes in minority groups and the impact of physiologic variables on these differences. Study etiology of diabetes using diabetes blood group analysis, particularly for American Indians.
- Support cohort studies to gain more insight into the etiology of drug abuse among minorities.
- Examine smoking prevalence and industrial exposures as contributing to CVD and the rapid rate of increase in lung cancer in Blacks.
- Examine factors associated with unplanned pregnancies, including both nonuse and inadequate use of contraceptives, in high-risk minority women and teenagers. Unplanned pregnancies are associated with worse patterns of prenatal care and higher rates of low birthweight.
- Investigate the prevalence of multiple risks (e.g., smoking and drug abuse) among different minority populations to understand possible synergistic effects on pregnancy outcome.
- Initiate prospective studies on perinatal outcome (low birthweight and infant mortality).

III. Research into Health Education Interventions

Health education interventions are directed at improving the awareness of individuals and communities about controllable risk factors associated with the causes of excess death and disability. Components of the major health problems facing minorities that are amenable to health education efforts include the misuse of alcohol and drugs, use of tobacco, dietary habits, exercise, stress management, compliance with medical regimens, and appropriate use of preventive services. It is not always clear, however, which type of intervention is best suited to the target audience and what kinds of outcomes should be expected from efforts to promote intervention strategies for minorities. Activities for investigating health education interventions include:

- Develop health education techniques appropriate to particular minority groups that will facilitate the adoption of specific interventions for risk factors, especially among groups at high risk for cardiovascular disease, cancer, diabetes, and homicide. Such research should recognize different cultural sensitivities and attitudes toward health behaviors related to these problems.

- Support research to develop and validate effective stress reduction and behavior modification strategies for treatment of coronary heart disease and its risk factors in minority populations.

- Develop model programs for use in community-based efforts to prevent homicide and improve delivery of services to victims of violence, such as the House of Umoja.

- Support studies among minority groups to identify existing health beliefs and practices more accurately.

- Analyze factors associated with positive perinatal health outcomes among Asian Americans to help identify ways to avoid adverse outcomes for other minority populations.

- Identify effective health education interventions for minority groups in the areas of dietary risk factor reduction, nutritional counseling, exercise, and smoking cessation.

- Support impact and outcome evaluations of minority health education interventions to help plan or modify interventions and to justify the allocation of resources to such projects.

- Elucidate specific characteristics of minority populations that may influence the dissemination of health information.

- Examine different methods of approaching minority populations, through schools or worksites, to effect behavior change for developing positive coping strategies. Explore differences in coping strategies between males and females.

IV. Research into Preventive Services Interventions

Maintenance of health and prevention of disease are major challenges to both the individual and the health community. To meet the challenge, rigorous prevention-oriented research should be initiated commensurate with the levels of need and representation of minority populations. Components of effective disease prevention and health promotion interventions that address minority health concerns and methods that build on the strengths of both urban and rural families and communities are among the activities stressed in this section. Research activities include:

- Assess the factors influencing compliance/noncompliance to antihypertensive medication regimens, especially in Filipino women. This group contrasts with other ethnic minority groups in the United States in which women generally have better blood pressure control than men.

- Design and support studies to develop prevention methodologies especially in the areas of alcohol and drug abuse as well as in each of the health priority areas. Assess the success of prevention and treatment strategies for alcohol and drug abuse in minority populations.

- Conduct evaluation studies to assess the impact of innovative approaches to prevent adverse pregnancy outcomes, especially for minority women. Sociological, behavioral, and biological variables should be controlled.

- Investigate the usefulness of expanded screening programs among minority groups, e.g., blood glucose screening in those over age 50 for diabetes, hepatitis B screening for pregnant Asian women, screening newborns for sickle cell disease, and sonography for Black women at increased risk for multiple gestations.

- Determine the mechanisms by which pregnancy planning influences prenatal care, birth outcomes, and infant well-being.

- Track victims of serious nonfatal violence (e.g., child abuse, spouse abuse, assault) because these may be events preceding homicide.

- Explore mechanisms for reimbursing counseling and patient education services provided under Medicare and Medicaid programs. Continue to develop demonstration programs, particularly those that serve minority populations, to identify the best means for reimbursing health education programs provided in clinical settings.

- Assess usefulness of clinical settings to offer counseling to minorities for key health behaviors.

- Support studies to identify beliefs, awareness, and prehospital behavior that might potentially delay diagnosis and treatment of cardiovascular disease, cancer, diabetes, and other conditions in minority patients.

V. Research into Treatment Services

Favorable health outcomes are related to accurate diagnosis, appropriate and timely therapy, and follow-up. Understanding the factors in primary health care settings that influence diagnosis and treatment of minorities is important in developing intervention approaches. Research is needed into the factors that operate in medical care settings including: the dynamics of the patient-provider relationship; the behavior, beliefs and attitudes of minority patients and health care providers; and patterns of treatment/medical care provided to minorities. Specific research activities follow:

- Assess determinants of physician behavior that influence patient interaction, follow-up, and the adoption of innovative techniques for prevention, early detection, and treatment.

- Determine how specific patterns of increased risk factors or preexisting conditions determined to be more common among minorities influence treatment approaches.

- Develop methods to monitor coronary heart disease events that occur in the community, such as: sudden death, hospital admissions and discharges of patients diagnosed as having heart disease, and emergency room visits for patients with chest pains and related complaints.

- Evaluate the long-term efficacy and safety of antihypertensive medications, particularly in Blacks.

- Identify delivery systems to facilitate the recruitment of hard-to-reach pregnant women into early care programs.

- Continue to evaluate the effect on perinatal outcomes of major programs such as Maternal Infant Care, Improve Pregnancy Outcome, and Supplemental Food Programs for Women, Infants, and Children.

- Elucidate how health service patterns and individual behavior during illness affect cancer incidence, survival, and mortality of minorities.

- Develop model programs to foster participation of State and Federal efforts in diabetes control.

- Study the specific components of prenatal care that have the greatest potential for preventing untoward perinatal complications.

VI. Research into Sociocultural Factors and Health Outcomes

Sociocultural factors play an important role in the maintenance of health, perception of illness, and/or the pattern of treatment sought by the individual. Many factors such as cultural heritage, socioeconomic status (SES), social support, knowledge attitudes, and health practices interact to affect health status. Furthermore, sociocultural factors may vary over time with other factors such as acculturation, economic and employment changes, age, or immigration patterns that affect either an individual or an entire group. These complex interrelationships can only be addressed through multidisciplinary research that investigates factors beyond those in a traditional biomedical model. Specific research activities include:

- Develop valid and reliable measures of acculturation and sociocultural indices that are sensitive to shifts in beliefs, values, and behavior patterns that might increase CHD risk in Native Americans. Similar measures should be developed for other diseases for which other minority populations have an increased risk of mortality.

- Study tribal variations in diabetes among middle-aged and older American Indians.

- Investigate SES as a risk factor for CHD, hypertension, stroke, hypertension-related end-stage renal disease, and cancer in all minority groups. Investigate minority subgroups who appear to have higher risk profiles and who actually display lower CHD mortality rates.

- Continue research on the association of social mobility and social status with CHD and other disease categories in minority populations.

- Focus studies on the link between economic conditions and infant mortality, including sociocultural factors that may help to explain the relatively good outcomes in infant mortality seen in the Asian, American Indian, and Alaska Native populations.

- Support research to characterize the experiences, attitudes, and beliefs among minority women who tend not to seek or continue prenatal medical care.

- Conduct research into the role of traditional folk medical practices among minority populations and its effect on health outcomes.

- Conduct descriptive studies to examine the relationship between level of acculturation, the influence of cultural beliefs, values, and behavior patterns in the maintenance of health, development of illness, and pattern of treatment in minorities.

Accounting For the Health Status Disparity

SOCIAL CHARACTERISTICS OF MINORITY POPULATIONS

Introduction

Among the many factors presumed to influence minority health status in the United States today, four social characteristics are believed to be especially significant: (1) demographic profiles, (2) nutritional status and dietary practices, (3) environmental and occupational exposures, and (4) stress and coping patterns.

The demographic profiles of Blacks, Hispanics, Asian/Pacific Islanders and Native Americans differ considerably from those of the nonminority populations (see Tables 2, 3, and 4). Marked differences also exist among the four groups and within each group. For example, native-born versus foreign-born status, age at time of immigration, and degree of acculturation are important variables within the Hispanic and Asian American populations. Dietary patterns and practices are similarly group-specific and fluctuate with the extent to which immigrants have adopted nonminority eating habits and food preferences.

Because high percentages of minorities are city dwellers, with high concentrations living in the inner cities, they are exposed to a relatively greater number of environmental hazards, including pollution, traffic hazards, substandard and overcrowded housing, and crime. Occupational risks faced by minorities are higher than those confronting nonminority group members because a higher proportion of minority individuals are employed in positions that potentially present greater levels of exposure to environmental risks, such as physical and mental stressors, and toxic substances.

Finally, the unique patterns of exposure to stressors and ways of dealing with stress and adversity in minority groups may play a crucial role in health outcome. An increasing body of research suggests that the ways an individual copes with stress and the resources available to resolve stressful situations, rather than the stressor itself, play the more important role in health outcome. In some minorities, traditional folk beliefs and culturally specific family patterns may affect their ability to withstand social, economic, and psychological stressors.

The following sections outline some of the demographic data, nutritional and dietary patterns, environmental and occupational risks, and behavior patterns that may influence the health status of minorities in the United States. Although the data on social characteristics of minorities are compared with those of nonminorities, each minority is discussed separately with few comparisons to the other minority populations.

Table 4

Occupational Distribution of Minority Groups
Ratio of Nonminority to Minority*

Occupation	Black		Asian		Native American		Hispanic	
Sex:	M	F	M	F	M	F	M	F
White Collar	1.39	1.59	1.03	.96	1.50	2.04	4.70	—
Blue Collar	.77	.85	.88	1.42	.68	.77	1.54	—
Farm	1.56	1.08	1.20	1.03	.78	.66	—	—
Service	.56	.49	1.03	.35	.57	.57	.13	—
Employed	1.08	1.07	1.90	1.39	2.95	1.82	—	—

SOURCE: Department of Commerce: A Statistical Analysis. Women in the United States. Series P-23, No. 100. Washington, D.C.

*Represents the ratio of nonminority to minority. For example, 39 percent more nonminority males are in white collar occupations than are Black males.

Social Characteristics of Blacks

The 1980 report of the Bureau of the Census indicates that one out of every five persons in the United States is a member of a minority group. Blacks are the single largest minority group, constituting 11.5 percent of the total population of the country. The number of Blacks in 1980 was 26.5 million, an increase of approximately 17 percent over 1970 Census figures. The distribution of Blacks compared with Whites is different within age categories. At age 15 or under, Blacks constitute approximately 15 percent of the total population, while by age 64, their relative proportion has declined to 8 percent.

Nearly 59 percent of all Blacks lived in the central cities in 1980, although increasing numbers were living in nonrural areas outside these cities. Cities with the largest number of Blacks are New York, Chicago, Detroit, Philadelphia, and Los Angeles. Migration of Blacks from the South not only slowed but slightly reversed during the 1970's; nonetheless, 53 percent of all Blacks still reside in the southern region of the country.

The median age of Blacks is 24.9 years. The life expectancy in 1983 was 65 years for men and 74 years for women, contrasted to 72 years and 79 years for White men and women, respectively. The age-adjusted mortality rate per 1,000 population for Blacks is 7.7; for Whites, 5.3.

Black families are on the average slightly larger than nonminority families, with the average Black family comprised of 3.7 members. Although total birth rates among all groups have dropped since 1970, the overall rate of childbearing is still higher among Black women than among women of nonminority groups, currently averaging 2.3 births per woman for Blacks and 1.7 for nonminority women. The percent of Black households headed by women (37.7 percent) is more than three times higher than that of nonminority households headed by women (10.9 percent).

Seventy-nine percent of Blacks have completed a high-school education, and 13 percent are college graduates. The median income of Black families in 1981 was $13,270; nonminority median family income was approximately $10,000 higher. One of every three Blacks (34 percent) lived below the poverty level in 1981. This rate was consistent with that of Hispanic and Native Americans but substantially higher than that of nonminorities, among whom the rate was 11 percent. Unemployment among Blacks in 1982 was 18.9 percent. This was more than double the nonminority unemployment rate of 8.6 percent.

There is no single dominant dietary pattern among Black Americans. Generally, dietary patterns may be subdivided into southern versus nonsouthern, urban versus rural, native-born versus foreign-born, and Christian versus Muslim. Many of the unique dietary patterns among Blacks are influenced by historical and regional food availability and food preparation practices. For example, among Blacks living in the southern region of the United States, diets may include a preference for vegetables, grain and grain products high in carbohydrates, and organ meats high in cholesterol.

Although there is a relatively high rate of meal skipping and a lower use of vitamin and mineral supplements among the Black population, there are no data that suggest major differences between Blacks and nonminorities today with regard to the proportion of calories consumed from carbohydrates, proteins, and saturated and unsaturated fats. Generally, Black diets are rich in sources of vitamin A, predominantly from green leafy vegetables, and in protein derived from poultry, fish, and dried beans. Blacks tend to consume fewer dairy products than do nonminority group members, possibly related to a higher rate of lactose intolerance among Blacks than Whites. Salt consumption is high; however, excessive salt intake is also a dietary risk factor in the diet of nonminority groups.

Breast feeding is less common among Black women than among nonminority women, with the exception of women from the Caribbean countries among whom breast feeding is more common. Some research has shown that pica (a craving for nonfood substances such as clay) is fairly common in Black women of the rural South. A significant nutritional risk among Blacks is the marked prevalence of obesity among Black women compared with nonminority groups. There is no evidence of extensive prevalence of growth stunting among Black children.

In general, Blacks have higher rates of morbidity and mortality from unintentional (accidental) injuries such as poison ingestion, asphyxiation resulting from faulty heaters, and drowning than do nonminority members. Blacks also have a much higher death rate from housefires than do nonminority group individuals. Differences in nondisease mortality and morbidity rates, however, are diminished with adjustment for income.

Black women have approximately the same rate of participation in the work force as nonminority women, while the rate for Black men is slightly lower than that of nonminority men. Black women have a 39 percent greater chance of sustaining job-related disease and serious work-related injuries than nonminorities. Blacks have a 25 percent greater chance of dying from such causes than nonminorites. Blacks in the work force are highly concentrated in three of the six major occupational groups: operators, fabricators, and laborers (27 percent); technical, sales, and administrative support (24 percent); and service occupations (23 percent). Blacks are consistently underrepresented in managerial and professional specialty occupations, where they constitute 6 percent of the work force.

A review of the family and behavior patterns of Blacks reveals that among the Black populations, kinship and family ties are extremely important. These ties often form the basis of a network of mutual support that can provide material, emotional, and social resources to family members in distress. Also, the church is a powerful source of emotional strength for many Blacks and their families. Folk beliefs about health and illness may have have varying effects on how an individual reacts to signs and symptoms of poor health. However, little is known about folk beliefs among Blacks or the extent to which Blacks rely on folk remedies. Research on the relationship between health beliefs and illness behavior suggests that such differences may assist in explanation of patterns of health care for some minorities.

Social Characteristics of Hispanic Americans

Hispanic Americans numbered 9.1 million in 1970 and 14.6 million in 1980, a 61 percent increase within the decade. By 1983, the Hispanic population in the U.S. had reached 15.9 million. Mexican Americans constituted nine million, or nearly two-thirds of this total, followed by Puerto Ricans (two million), and Cubans (one million). All told, Hispanic Americans constitute 6.4 percent of the population of the United States. The more than three million Puerto Ricans residing in Puerto Rico are not included in these figures, since they are treated separately by the Census Bureau.

Sixty percent of all Hispanics live in Arizona, California, Colorado, New Mexico, and Texas. Half of the total live in two states, California and Texas. The Hispanic population showed signs of greater geographic dispersion during the 1970s, most notably to New York, Illinois, and Florida. Half of all Cuban Americans live in Florida. One out of two Hispanic Americans lives in the inner city of metropolitan areas, and they are heavily concentrated in the larger cities, i.e., those with a population of one million or more.

Hispanics are generally a youthful population. In 1980, 20 percent were less than ten years of age, contrasted to 14 percent for the country as a whole. Conversely, only 3 percent of Hispanics were more than 70 years of age, as opposed to 7.7 percent of nonminorities. The median age of Hispanic Americans is 23 years.

Hispanic Americans have a relatively high fertility rate; the number of children per family is 2.3. Twenty-three percent of Hispanic households are headed by women; among Puerto Rican families, the rate is 40 percent. Forty-nine percent of Hispanic women are in the work force. Fifty-eight percent of Hispanic Americans have completed a high-school education; this number is more than 20 percentage points lower than that of the Black population. One out of every ten Hispanic Americans holds a college degree.

The median family income for Hispanic Americans in 1981 was $16,228. Thirty percent of all Hispanics were living below the official poverty level in 1982, and 13.8 percent were unemployed.

The variation in dietary practices among Hispanic Americans reflects the diversity of backgrounds among this subset of the population. Certain similarities, however, may be seen; these include a relatively higher reliance on vegetable protein sources rather than on meat sources. Grains and grain products are dietary staples. Green leafy vegetables are not a typical part of the diet. Consumption of dairy products is relatively low.

Food consumption and preparation practices common among Hispanics of Mexican, Puerto Rican, and other backgrounds are generally adequate to provide all needed nutrients. Fiber consumption is high. Animal fat content is substantial, but it is roughly equivalent to that of the typical nonminority diet.

Several authors have reported concern over the high sodium and high carbohydrate content of many Hispanic diets. Studies also have shown an excessive prevalence of growth stunting in Hispanic children, especially among those two to five years old. This problem is more severe among children not born in the United States than it is among native-born Hispanic children. Growth stunting is also more prevalent among children of lower income families. It has been suggested that the incidence of chronic disease such as diabetes mellitus is related to overnutrition and obesity in Hispanics.

A large proportion of Hispanics work in blue collar, service, or agricultural occupations. The shift from rural, unskilled labor to blue collar work has not been accompanied by a rise in socioeconomic position. Hispanic Americans are overrepresented in positions in the manufacturing and construction industries, which report the first and second greatest number of work-related injuries, respectively. They also are overrepresented in farming and in metal mining, two additional high-risk employment areas. Data from the Social Security Administration reveal that severe disability resulting from work-related injury was almost twice as high among Hispanics as among nonminority workers in 1980. It may be presumed that the impact of occupational injury on Hispanics may be much higher because of the number of migrants and undocumented workers who are not reported when injured and who do not receive workmen's compensation benefits.

In 1982, Hispanics were classified in the employment category of "operators" almost twice as often as nonminorities (23 percent versus 12 percent). Hispanics have lower rates of employment than nonminorities as professional workers (9 percent versus 17 percent) and in management positions (7 percent versus 17 percent). They have higher employment rates as general laborers (7 percent versus 4 percent) and as farm laborers (4 percent versus 1 percent).

Hispanic Americans have a very strong family and community orientation. The church and parish community are an important focus of family and social life for many Hispanics. In more rural settings, some Hispanics view the community as an extension of the family and feel that it has a protective and healing force that may be used to reinforce an individual's own coping skills. However, regional studies on naturalistic support systems indicate that the quality of support, rather than the number of sources, has a greater impact on the effectiveness of support systems in ameliorating stress. Little research has been done to explore how family, church, and community interact to provide support to a community member. Many Hispanics accord their elders respect and authority and value their support in times of distress.

Social Characteristics of Asian/Pacific Islanders

The number of Asian/Pacific Islanders in the United States grew by 120 percent between 1970 and 1980. As of 1980, this group numbered 3.7 million and constituted 1.6 percent of the population. Asian/Pacific Islanders have a far larger percentage of foreign-born persons (58 percent) than any of the other United States minority groups.

Asian/Pacific Islanders come from more than 20 different countries. The three most common countries of origin are China (812,000 persons), the Philippines (781,000), and Japan (716,000). A distinct trend in Asian/Pacific Islander demographics of the past decade has been the immigration of large numbers of Southeast Asians under the Refugee Resettlement Program. However, data on social charactistics of Asian/Pacific Islanders principally reflect information from the three largest subgroups.

Asian/Pacific Islanders live predominantly in the western part of the United States, although their concentration in this region has begun to decrease noticeably. Fifty-six percent now live in the West, compared with 70 percent at the time of the 1970 census. Four out of every five of the country's recent Indochinese immigrants live in 16 states; one-third of the total live in California, and one-tenth are in Texas.

The median age of the Asian/Pacific Islander population is 28.7 years. This is higher than that of the other three largest minority groups but still lower than the median age (31.3 years) of the nonminority group. The age-adjusted mortality rate is 3.2 deaths per 1,000 population. Only 11 percent of Asian/Pacific Islander households are headed by women; this is less than the nonminority rate. Fifty-eight percent of Asian/Pacific Islander women are in the workforce.

The median educational level of Asian/Pacific Islanders is quite similar to that of the general population. Three out of four have completed high school, and approximately one out of three holds a college degree.

The median income level for Asian/Pacific Islander families, as shown in the 1980 census, was $22,713. Median income among Asian/Pacific Islander families is consistently higher than that of any other group, including the nonminority group. Asian adults, however, often share a household for reasons of exigency, thereby inflating the reported "family" income. As a result, the true extent of poverty among Asian/Pacific Islanders is often masked.

Moreover, income differs substantially among the Asian subgroups: it is highest among those from Japan and lowest by far ($12,840) among the Vietnamese. The unemployment rate shows similar variations. In 1979, the overall poverty rate for Asian/Pacific Islanders was 13.1 percent; the range was from 7 percent for the Japanese and Filipino subgroups to more than 35 percent for the Vietnamese. The unemployment rate for the overall Asian/Pacific Islander population stands at 4.7 percent, which is nearly two percentage points lower than the nonminority rate.

The primary source of calories for many Asian/Pacific Islanders is rice. The varieties of rice used and the techniques of preparation, however, are diverse. Prewashed or unenriched rice poses risks of low vitamin B and mineral intake, although such deficiencies may be overcome by adequate intake of pork or fish. Consumption of vegetables, fruits, fish, and shellfish is relatively higher; but intake of animal protein is relatively lower than that of the nonminority population. Dairy products are used much less frequently; however, the traditional sources of calcium in the Asian diet are from soy bean curd, sardines, or green leafy vegetables. With acculturation, adaptation of the traditional Asian diet to the foods most readily available in the United States generally involves increasing the proportion of caloric intake coming from animal protein, fats, and refined sugar. Intakes of complex carbohydrates and cholesterol increase, while fiber intake decreases. Such changes are reflected in the higher weight and increased rate of coronary disease among Asians in the United States compared with cohorts in their countries of origin. Many foods in the Asian diet, such as salted and pickled vegetables, soy sauce, meat and fish pastes, and fermented soy bean curd, are high in sodium.

When all aspects of the Asian/Pacific Islander diet are taken into consideration, an area of concern is possible growth stunting, which may affect as many as one-third of the children between two and five years of age. However, the data are insufficient to determine if this is true and if it has health consequences for Asians/Pacific Islanders. Low weight for height is not a problem. Obesity, a notable health risk among other minority groups, is not common among Asian/Pacific Islanders.

Information on occupational patterns and employment rates of Asian/Pacific Islanders are most complete for the larger subgroups, Chinese, Japanese and Filipinos. Although there are relatively larger numbers of Asian/Pacific Islanders employed in white collar positions, a disproportionate number of Asian/Pacific Islanders are engaged in jobs that are substantially below their educational levels. Taking into account both men and women, 19 percent of Chinese, 15 percent of Japanese, and 14 percent of Filipinos have professional occupations, compared with 13 percent for nonminorities. At the same time, 19 percent of Chinese, 17 percent of Filipinos, and 13 percent of Japanese workers have service occupations, compared with only 11 percent of nonminorities.

Recently arrived Indochinese refugees constitute a specific subset within the larger Asian population that may vary considerably from the demographic patterns cuurently reported for more established Asian groups. Their unemployment rate and poverty rate are much higher than other Asian groups, and nonminorities. Furthermore, because many of these newcomers speak little or no English, they often are forced to seek employment in positions with a disproportionate number of occupational hazards or in low-level service areas.

Many Asian/Pacific Islanders pride themselves on their independence and self-sufficiency. Consequently, some are particularly reluctant to seek health services, especially for mental illness or for counseling. In some Asian countries, the ability to control the expression of feelings is often felt to be a sign of refinement. The family is very important to many Asians, and some Asians believe that seeking help outside the family is a sign of weakness. Although cultural patterns of family reliance often strengthen an individual's social support resources, they also may pose a barrier to care when it is truly needed. Some Asian/Pacific Islanders consult traditional healers such as acupuncturists and herbalists or use traditional remedies as supplements to other western medical care sources. The extent of use and efficacy of traditional medicine among Asian/Pacific Islanders is unknown.

Social Characteristics of Native Americans

Native Americans include American Indians, Aleuts, Alaska Eskimos, and Native Hawaiians. Data reported here, however, refer primarily to American Indians for whom information is most available.

American Indians are the smallest minority group in the United States. In 1980, they numbered approximately 1.5 million, less than one percent of the total population. The average American Indian family has 4.6 members; this is larger than any other minority or nonminority group. The birth rate among American Indians is nearly twice that of other groups, and the average life expectancy is six years less. The median age of American Indians--22.4 years--is lower than that of any other group. It is nearly nine years lower than that of the nonminority population.

Nearly one out of every four American Indian households is headed by a woman, and approximately half (48 percent) of American Indian women are employed outside the home.

The overall educational attainment of American Indians is the lowest of all minority groups. The 1980 census revealed that fewer than one out of three (31 percent) have graduated from high school and that only 7 percent hold college degrees.

Likewise, median family income is well below the national level. In 1979, it was $15,900 per year, which is $7,200 below the level for the nonminority group. Twenty-nine percent of American Indian families lived in poverty in 1979; this is similar to the overall poverty rate among Black and Hispanic minorities but substantially higher than the poverty level of Asian/Pacific Islanders and of the nonminority group. The unemployment rate among American Indians in the civilian labor force in 1979 was more than 13 percent.

One-half of all American Indians live in the western or southwestern United States. Twenty-four percent live on reservations, and another 8 percent live on historic trust areas in Oklahoma. Most of these reservations have fewer than 1,000 residents; only one reservation has a population greater than 100,000.

Tribal variations are considerable in current diets of American Indians. Factors contributing to dietary differences are food availability, preference for nonminority food, and place of residence (i.e., urban or reservation). In general, the diets of many traditional American Indians today are high in refined carbohydrates, fat, and sodium. They are low in meat, eggs, cheese, and milk; this may indicate a potential problem with protein deficiency.

A relatively high percentage of American Indian women report that they breast feed their infants, and the growth patterns indicating adequate childhood nutition are not markedly different from that of nonminority children. There is, however, a disproportionate incidence of high weight for height among American Indian children that begins in early childhood. Likewise, obesity is a problem for a large proportion of American Indian adults and may be associated with the high risk of diabetes mellitus in this population. Alcohol-related disease is also a source of concern among the American Indian population, and excessive alcohol consumption may interfere with adequate nutritional intake.

Native Americans, along with Blacks, have the highest rates of injury and death from nondisease causes. Motor vehicles are included in nearly half of all accidental injuries, and the rate of such accidents among Native Americans is higher than that of any group.

The unemployment status of a large number of American Indians seems due to a combination of socioeconomic and cultural factors. However, industrial firms attracted by tax incentives, low labor costs, and an accessible labor force have begun moving onto some of the Indian reservations. Although they provide a much needed source of employment, many of these industries are of the type that produce a number of occupational risks. This may increase the health risks to American Indian workers. Because of traditional cultural beliefs, some Native Americans are reluctant to use prescribed safety measures or precautions. The National American Indian Safety Council (NAISC), representing a cross-section of the Indian tribes, is working to establish guidelines that may assist in reducing occupational hazards for these workers.

The mores and cultural patterns of the nonminority population imposed upon Native Americans have disrupted their traditional way of life. A sense of powerlessness and hopelessness has often been observed as a result and may be related to the high incidence of alcohol abuse, suicide, depression, and obesity among this population.

The medical and socioeconomic consequences of alcoholism, which is sometimes viewed as a way of coping with cultural disruption, are extensive and tragic; they include death and injury from motor vehicle accidents, assaults, family violence and disintegration, and alcohol-related disease. Alcoholism also contributes to instability of the work force.

American Indians, however, are also observed to draw upon traditional sources of strength to cope with stressors. Traditional strengths include the family, the tribe, and the land itself. Yet, many American Indian children leave their homes today, most often to go to boarding schools. Many of those who have studied the problems of the American Indian family believe that this practice has weakened, rather than strengthened, family stability.

It is recognized that traditional medicine men play powerful roles in the health practices of this population. Health care and social programs should be coordinated with these individuals, with the awareness that treatment outcome is strongly influenced by the belief system of the patient.

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MORTALITY AND MORBIDITY INDICATORS

Introduction

Differences in life expectancy between minorities and nonminorities strongly suggest the existence of health problems among certain segments of the population. Although life expectancy dramatically summarizes the overall differences in specific causes of death and illness among various groups in the United States, Secretary Heckler asked the Task Force to go beyond life expectancy data and investigate more fully the magnitude of the disparity in health status of minority groups compared with nonminorities, and its causes. Consequently, the Task Force examined and identified appropriate indices to measure the various disparities, identified the leading causes of death and their ramifications within each minority, examined other indicators of health status and morbidity for minority groups, and reviewed the socioeconomic correlates of these factors. Based on this investigation, the Task Force was to suggest approaches for reducing the identified disparities.

Measures of Mortality

In addition to life expectancy, two other indices were used by the Task Force to summarize mortality differentials: 1) excess deaths, and 2) relative risk of death.

"EXCESS DEATHS" expresses the difference between the number of deaths actually observed in a minority group and the number of deaths that would have occurred in that group if it experienced the same death rates for each age and sex as the White population (1). "Excess deaths" are sometimes referred to as "observed minus expected deaths" (when expected deaths are based on the death rate of the White population). Excess deaths can be calculated for each age and sex group as well as for specific causes of death. When minority death rates are higher than those of Whites, excess deaths will be a positive number greater than zero; it will be zero when the rates are the same as for Whites; and it will be a negative number when the death rates for minorities are lower than for Whites.

The measure of excess deaths depends on differences in death rates between the minority and nonminority populations and specifies the actual deaths in a minority group attributable to these mortality rate differences. The number of observed excess deaths also depends on the size of the minority population and the number of total deaths. Further analysis with this measure can identify excess deaths due to a specific cause such as heart disease, affecting the greatest number of people in a particular group.

To account for the differences in size of the population, the "relative risk" of death is used. "RELATIVE RISK" is the ratio of the minority death rate to the White death rate. Relative risk also can be calculated for specific causes of death and for each age and sex group. When the relative risk of death is greater than 1.0, it indicates that the death rate is proportionally higher in the minority group than in Whites; a value of 1.0 or less than 1.0 indicates that the minority group has the same or lower death rate as Whites. A high relative risk for a specific cause of death may be misleading if a disease is rare and affects a small number of people. The relative risk for a rare condition may appear to indicate a disproportionally high risk for a problem that may not be serious in terms of excess deaths because so few individuals are affected.

The Task Force used excess death as the primary indicator of the disparity and used measures of relative risk to confirm and extend findings of the excess deaths' index. Both excess deaths and relative risk as applied by the Task Force are statistics which present death rates for minority groups only as compared to the White population.

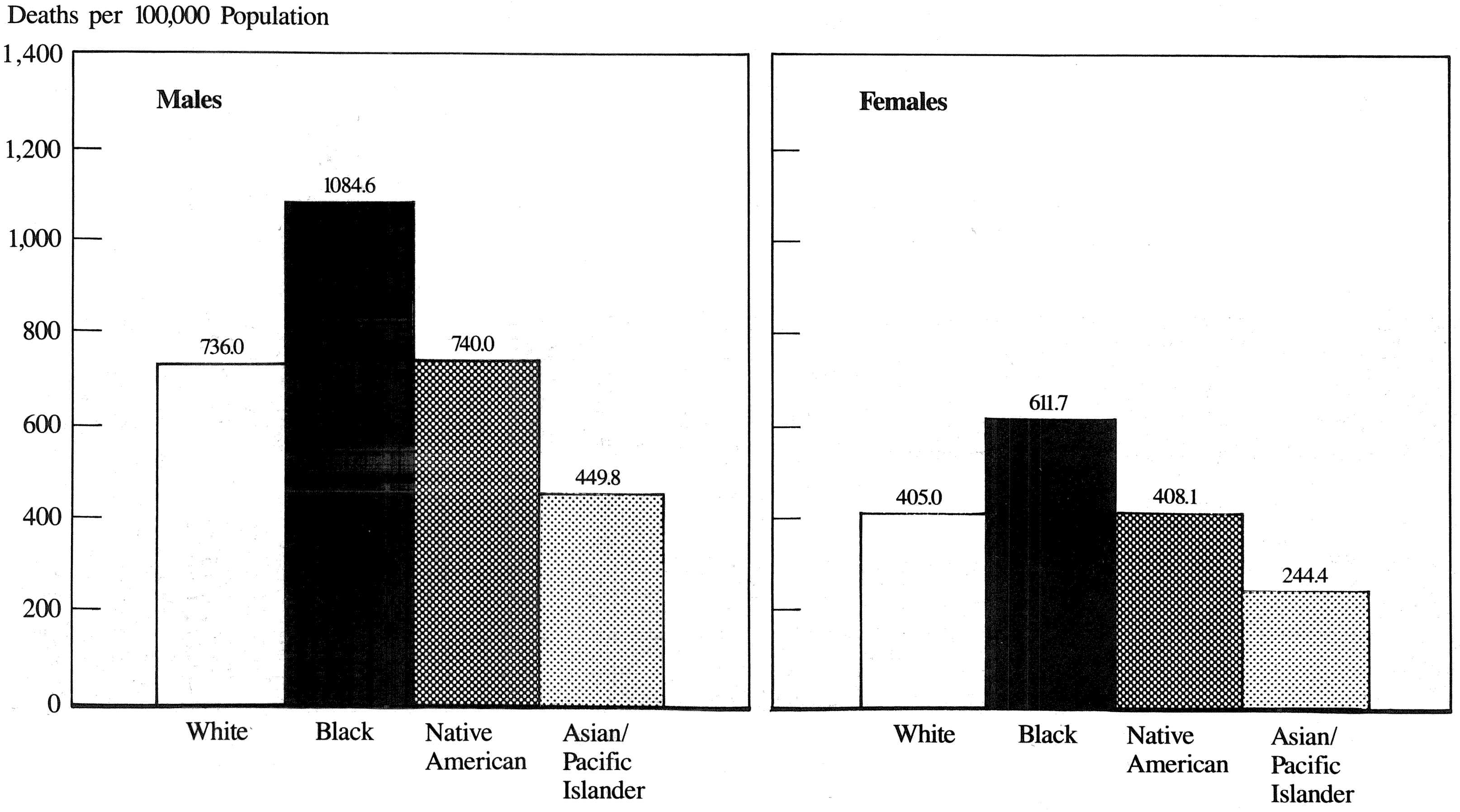
The age-adjusted death rate for the United States, which takes into account the age structure of different population groups, was 553.8 deaths per 100,000 population, and is estimated to be 549.6 for 1983 (2). Figure 1 shows the average annual age-adjusted death rate for several racial groups. Life expectancy at birth has been rising, increasing from 74.6 years in 1982, to 74.7 years in 1983.

Despite these encouraging overall trends, differences in health status indicators remain between minority groups and Whites, as seen in Figure 2. Life expectancy at birth for White males in 1982 was 71.5 years; for Black males, it was 64.9 years. Since life expectancy is not routinely available for other minority groups, special calculations were commissioned by the Task Force. These data indicate that life expectancy for Native American males was 70.4 years in 1979-81, and life expectancy for Asian males was about seven years greater than that of Whites. Data on Hispanics are not available to estimate comparable life expectancy. Minority and nonminority women have a longer life expectancy than men; minority women, however, experience similar disparities in health status compared to nonminority women. Asian females have the highest life expectancy of any group (3).

The Task Force explored the disparity in death rates between minorities and Whites by disease category, by analyses of relative risk of death for the different disease categories (shown for Blacks in Table 5) and by analyses of excess deaths. Based on these analyses, the Task Force observed that four of every five excess deaths among minorities result from six causes: cancer, heart disease and stroke, infant mortality, diabetes, homicide and unintentional injuries, and chemical dependency (primarily alcohol abuse as revealed by

Figure 1

Average Annual Age-Adjusted Death Rates for All Causes, 1979-1981

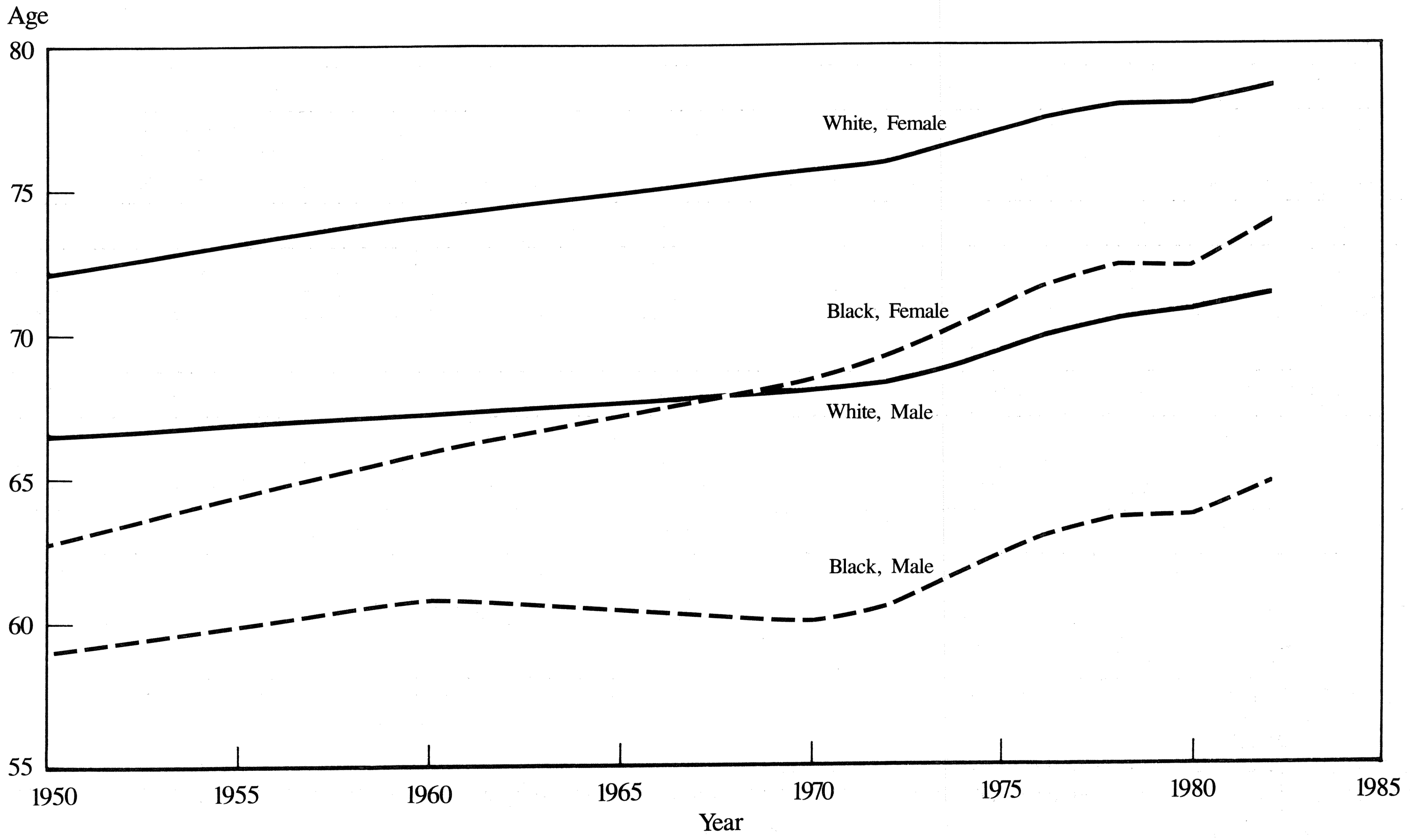


NOTE: Death rates for Hispanics are not available. Death rates for Native Americans and Asian/Pacific Islanders are probably underestimated due to less frequent reporting of these races on death certificates as compared with the Census.

SOURCE: National Center for Health Statistics, Bureau of the Census, and Task Force on Black and Minority Health.

Figure 2

Life Expectancy at Birth, According to Race and Sex: United States, 1950-1983



SOURCE: National Center for Health Statistics.

Table 5

Age-Adjusted Death Rates by Selected Cause, Race, and Sex United States, 1980

(Rate per 100,000 Population)

	Black Male	White Male	Relative Risk	Black Female	White Female	Relative Risk
Total Deaths (All Causes)	1,112.8	745.3	1.5	631.1	411.1	1.5
Heart Disease	327.3	277.5	1.2	201.1	134.6	1.5
Stroke	77.5	41.9	1.9	61.7	35.2	1.8
Cancer	229.9	160.5	1.4	129.7	107.7	1.2
Infant Mortality	2,586.7	1,230.3	2.1	2,123.7	962.5	2.2
Homicide	71.9	10.9	6.6	13.7	3.2	4.3
Accidents	82.0	62.3	1.3	25.1	21.4	1.2
Cirrhosis	30.6	15.7	2.0	14.4	7.0	2.1
Diabetes	17.7	9.5	1.9	22.1	8.7	2.5

SOURCE: NCHS, Health: United States, 1983, Tables 9 and 15.

cirrhosis). Figure 3 illustrates the major contributors to excess death for Blacks, in 1980, for those who died before age 45 or before age 70. The data clearly depict that the bulk of excess deaths in each age bracket are attributable to the six causes cited. Homicide and accidents, infant mortality, and heart disease and stroke contribute the greatest number of excess deaths before age 45 in Blacks. Heart disease and stroke, and cancer increasingly contribute to excess deaths in Blacks when deaths up to age 70 are examined. The same six causes of excess death also apply to Hispanics, Asian/Pacific Islanders, and Native Americans, although the ranking may vary.

Subcommittees were formed to investigate the reasons for disparities due to these six causes of death. Suicide among minorities was added to the charge to the Subcommittee on Homicide and Unintentional Injuries based on the contribution of suicide to the excess deaths of Native Americans. Detailed results are found in the Subcommittee summary reports and in later volumes of this Task Force report.

Other Health Status Measures

Morbidity and health status measures were also examined as indicators of the disparities in health between nonminorities and minorities in the United States. These measures were taken largely from the NCHS National Health Interview Survey (NHIS), an annual survey sampling 40,000 households nationally. Morbidity estimates are based on prevalence rates from self-reports of the sample population for a selected list of diseases. Health status measures include self-assessed health, number of physician and dentist visits, and number of hospital admissions. An analysis also was commissioned to determine differences in ambulatory care use among minorities (4).

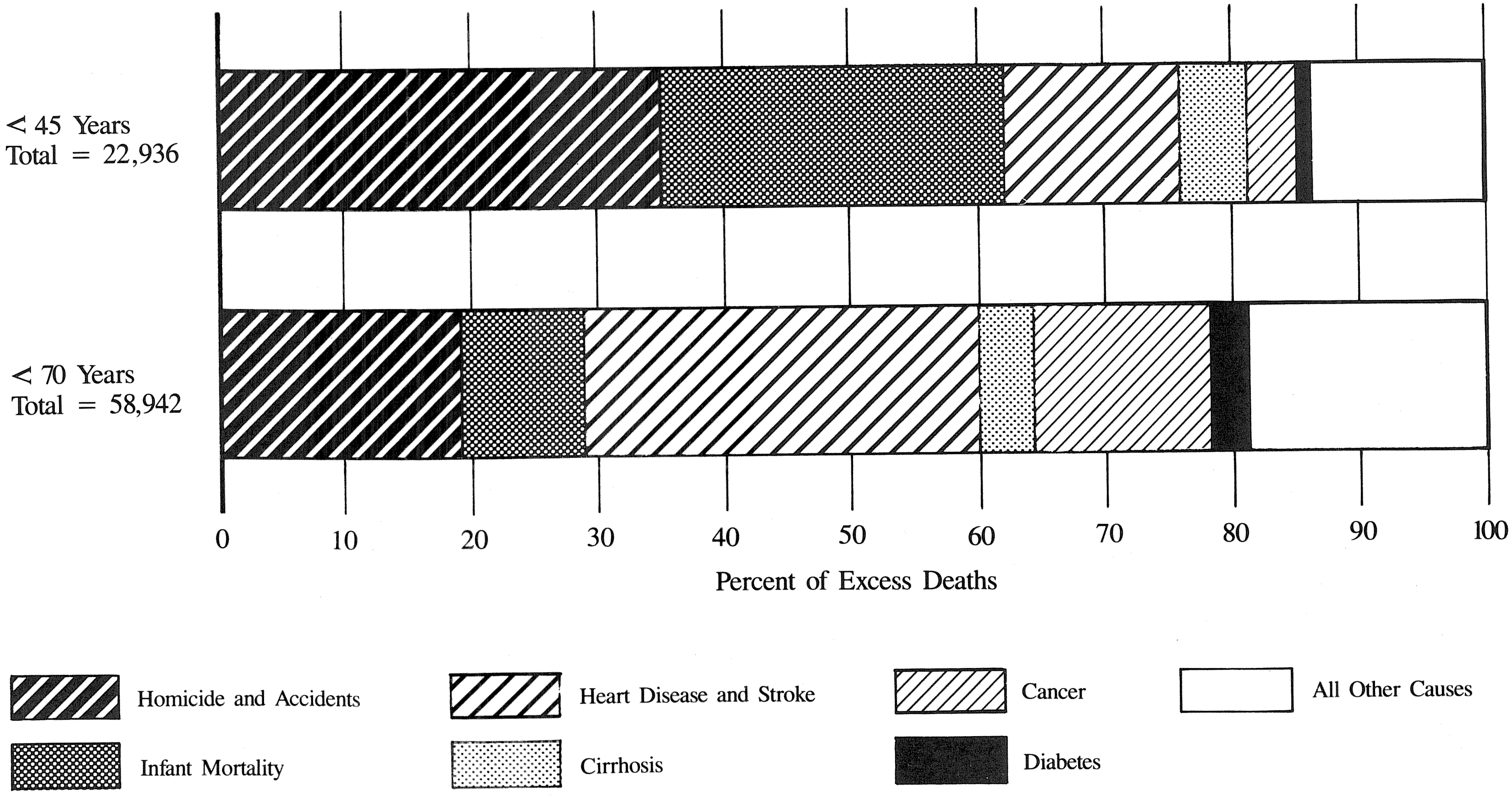
The 1976 Survey of Income and Education (SIE) provided measures of social characteristics related to self-assessed health status for minorities. Additional information from the Health Care Financing Administration End-Stage Renal Disease Program and from the DHHS Office for Civil Rights reports of hospital admissions and emergency room visits was examined. These sources proved to be severely limited for the needs of the Task Force because of difficulty in identifying minorities by age-sex group and health problem for comparison to Whites.

Limitations of Data

A variety of measures of health status are needed to draw conclusions about diferences in health status among minority populations; single measures such as national mortality summaries may not provide a complete enough picture. Although mortality data are available by age, sex, and race for Blacks, Asian/Pacific Islanders, Native Americans, and Whites, the Task Force noted that one of the most serious data deficiencies is the lack of national mortality data

Figure 3

Average Annual Excess Deaths for Blacks, 1979-1981



*The base of "zero" is equal to the mortality rate for Whites. "Excess deaths" indicate those observed in excess of the White rate.
SOURCE: Duke University Analysis Commissioned by HHS Task Force on Black and Minority Health, 1984-1985.

for Hispanics. These data are usually obtained from death certificates but, for Hispanics, ethnicity is not uniformly recorded in every State.

In addition, mortality data are usually not recorded for subgroups within Asian/Pacific Islander and Native American populations. Although mortality rates are believed to vary among subpopulations, no information is available on a national basis from which to analyze data for subgroups.

The Task Force also noted that the sample sizes of minorities, other than Blacks, in surveys tend to be insufficient to obtain an accurate picture of disparities in health compared to Whites. Data on the health status of Native Americans and Asian/Pacific Islanders compiled from surveys must be aggregated over time to obtain adequate numbers to draw statistically valid conclusions. Despite these limitations, the National Health Interview Survey (NHIS) does provide sample coverage of Native Americans and Asian/Pacific Islanders. Health information about American Indians and Alaska Natives on or near reservations is available from the Indian Health Service.

As in the mortality data, the NCHS health survey statistics on illness and disability do not generally distinguish subgroups within the racial/ethnic groups as a whole. For example, recent immigrants from Southeast Asia have more health problems than the more established Asian/Pacific Islander groups, such as Chinese, Japanese, and Filipinos, yet all data are aggregated into the Asian/Pacific Islander minority group which, overall, has a greater life expectancy than the White population (5).

The following sections present highlights of the mortality and morbidity findings for Blacks, Hispanics, Asian/Pacific Islanders, and Native Americans.

MINORITY HEALTH INDICATORS

Blacks

Of two million American deaths per year, roughly twelve percent are Black. Between 1979 and 1981, an average of 227,000 Blacks died each year. Of these, 139,000 Blacks were under the age of 70 years. About 59,000 of these deaths among Blacks under age 70 would not have occurred had Blacks experienced the same age-sex death rates as Whites. These "excess deaths" represent 42.3 percent of all Blacks who died before the age of 70. Table 6, based on death certificate information, indicates the major causes of the excess deaths in Blacks under ages 45 and 70; Figures 4 and 5 illustrate the contributors to the average annual excess deaths for Black men and women.

The disparity between the death rates of Blacks and Whites (excess deaths) affects certain age groups more than others. Compared to Whites, Blacks have twice the rate of infant mortality. The

Table 6

BLACKS
Average Annual Number of Deaths by Disease Category, United States, 1979-1981

		CVD*	Cancer	Cirrhosis	Infant Mortality	Diabetes	Unintentional Injuries	Homicide	All Other	Sub-Total***	Total Deaths
Blacks under Age 45											
Males	Observed	3,236	1,587	961	6,782	201	5,940	6,487	5,900	(31,094)	31,094
	Expected**	1,340	1,204	259	3,465	86	6,000	1,019	3,203	(16,576)	16,576
	Excess	1,896	383	702	3,317	115	−60	5,468	2,697	(14,518)	14,578
Percent of Total Excess****		13	3	5	23	1	0	38	19		100
Females	Observed	2,090	1,790	549	5,540	184	1,905	1,488	3,686	(17,232)	17,232
	Expected**	674	1,366	130	2,679	77	1,991	343	1,838	(9,098)	9,098
	Excess	1,416	424	419	2,861	107	−86	1,145	1,848	(8,134)	8,220
Percent of Total Excess****		17	5	5	35	1	0	14	22		100
Blacks under Age 70											
Males	Observed	24,913	16,117	2,706	6,782	1,190	8,429	7,935	16,629	(84,701)	84,701
	Expected**	16,444	10,335	1,344	3,465	544	7,316	1,227	8,914	(49,589)	49,589
	Excess	8,469	5,782	1,362	3,317	646	1,113	6,708	7,715	(35,112)	35,112
Percent of Total Excess****		24	16	4	9	2	3	19	22		100
Females	Observed	17,788	11,946	1,525	5,540	1,786	2,739	1,796	10,817	(53,937)	53,937
	Expected**	8,076	9,677	743	2,679	583	2,605	415	5,614	(30,392)	30,392
	Excess	9,712	2,269	782	2,861	1,203	134	1,381	5,203	(23,545)	23,545
Percent of Total Excess****		41	10	3	12	5	1	6	22		100

*Cardiovascular disease (CVD) combines heart disease and stroke.

**The expected number is calculated from the rate observed in the White population.

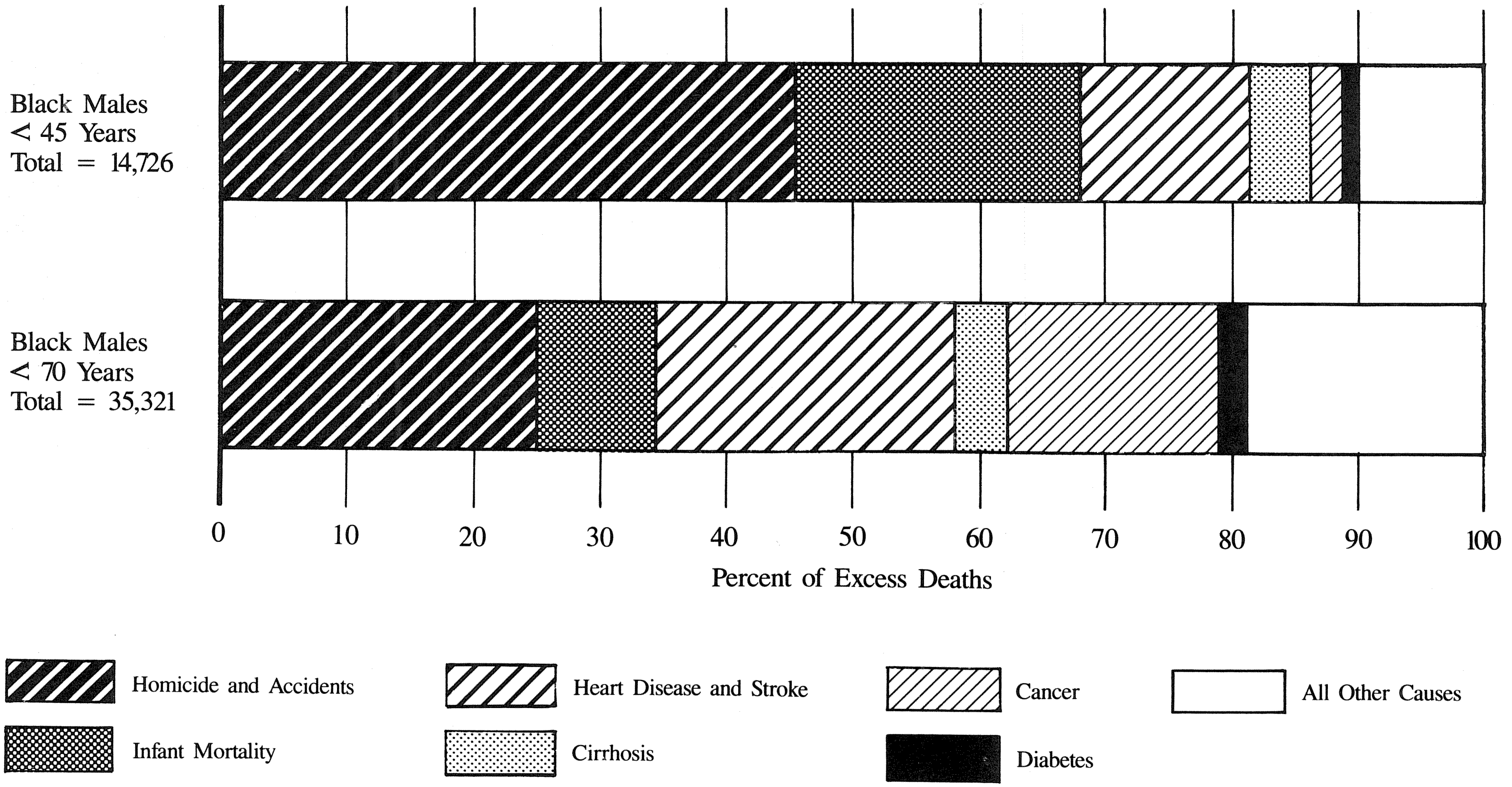
***Sub-total is the sum of negative and positive excess deaths. Total deaths sums positive excess deaths only.

****Percentages based on total deaths.

SOURCE: Duke University, analysis commissioned by the Task Force on Black and Minority Health, 1984-1985.

Figure 4

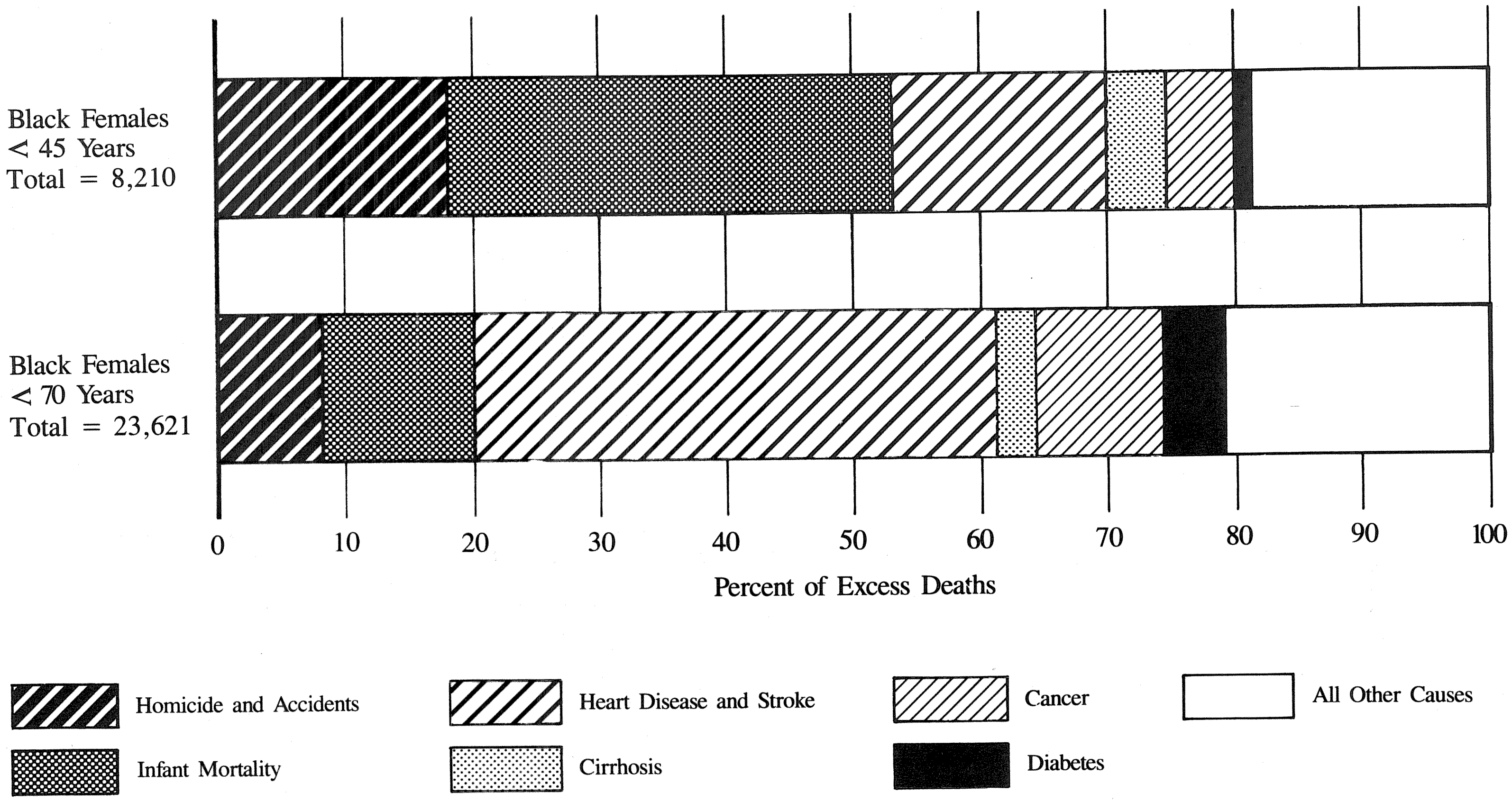
Average Annual Excess Deaths for Black Males, 1979-1981



*The base of "zero" is equal to the mortality rate for Whites. "Excess deaths" indicate those observed in excess of the White rate.
SOURCE: Duke University Analysis Commissioned by HHS Task Force on Black and Minority Health, 1984-1985.

Figure 5

Average Annual Excess Deaths for Black Females, 1979-1981



*The base of "zero" is equal to the mortality rate for Whites. "Excess deaths" indicate those observed in excess of the White rate.
SOURCE: Duke University Analysis Commissioned by HHS Task Force on Black and Minority Health, 1984-1985.

disparity is smaller through age 24, followed by a sharp rise in excess deaths thereafter through age 64. Thus, for infants and adults through middle age, the excess deaths are most pronounced.

In later life, minorities have lower death rates for many diseases than do nonminorities. This "survivor effect", or mortality crossover, has been attributed to hardiness among survivors in a population that has a higher early-age death rate.

The excess death rates for Black males and females are similar across age categories except that a greater percentage of males than females died between the ages 25 to 44, but a greater percentage of females than males died between the ages of 45 to 69.

Homicide was the major cause of these excess deaths occurring in Blacks, aged 25 to 44 years. Homicide accounted for 38 percent of the male excess deaths and 14 percent of the female excess deaths below age 45. Excess Black deaths between the ages of 45 to 69 were due mainly to cancer, heart disease, stroke, diabetes, and cirrhosis.

As seen in Figure 4, homicide and unintentional injuries are the major contributors to excess deaths for Black males. Heart disease and stroke and cancer assume greater importance with advanced age. For Black females, as shown in Figure 5, death from heart disease and stroke assume the same importance as homicide and unintentional injuries do for younger Black males. Diabetes is increasingly important in the excess deaths of older Black females. Though diabetes itself accounts for less than 2 percent of male excess deaths and 5 percent of female excess deaths (to age 70), it is a major risk factor for heart disease and leads to other serious consequences, including amputation and blindness, if uncontrolled.

Hypertension similarly has serious health consequences if left untreated. It is the leading cause of kidney failure and hypertension-related end-stage renal disease in Blacks and is a major concomitant of heart disease and stroke. Hypertension itself accounts for more than 5 percent of the excess deaths in Blacks. Cirrhosis accounts for more than 3 percent of excess deaths in both Black males and females (to age 70), and unintentional injuries account for 6 percent of the excess in males and 2 percent of the excess in Black females (to age 70). to age 70. Many of the causes of excess deaths in Blacks are amenable to reduction through preventive and public health activities. Hypertension and diabetes, which relate to other conditions, are controllable through proper treatment.

Relative risks for specific causes of death under age 45 are disturbingly high among Blacks compared to the White population, and further support the findings of excess death. Blacks under 45 years of age have a relative risk of death from all causes nearly twice that of Whites (1.96 for males and 1.93 for females). Relative risk does not indicate the largest numbers of deaths; rather, it reflects the comparative likelihood of dying from a particular cause. The conditions for which relative risks of death are highest for Black (compared to White) males and females under age 45 are:

	Males	Females
Tuberculosis	17.4	15.6
Hypertension	10.2	13.4
Homicide	6.6	4.3
Anemias	6.0	5.2

Deaths from tuberculosis (TB) and anemias, although not major causes of death, occur at a higher frequency among Blacks and may be related to socioeconomic conditions commonly associated with these diseases.

Morbidity data from NHIS substantiate the problems Blacks, especially women, face with hypertension, diabetes, and anemia. Black women ages 45-64 had a prevalence rate of hypertension 85 percent higher than White women, with hypertension afflicting 43 percent of the Black women sampled in the 1979-81 NHIS. More striking data also appear. Black women ages 25-44 had a prevalence rate for hypertension 2.6 times greater than White women of the same age; diabetes rates in Black women 45-64 were 2.7 times higher than those in Whites, and anemia rates reported were higher at all ages, ranging from 6.7 times in children ages 1-14 to 2.6 times higher in Black women 15-44. These morbidity figures clearly show the health disparities in Blacks surfacing early in life, and several health conditions responsible for the disparities are known risk factors for cardiovascular disease.

Disability data from the 1976 SIE provides additional information on health differences in Blacks. Blacks reported lower rates of disabling heart disease than Whites at each income level. However, because the rates decrease as income rises and there are proportionally more Blacks among the lower income strata, the overall Black rates of disabling heart disease are higher. Similar correlations can be found between education and other diseases reported in SIE. The main conclusion from this analysis is that income and education are major factors influencing health status. Lack of income and education must be recognized as risk factors for disease and death in Blacks.

Hispanics

Hispanics are the second largest minority group in the United States. For many data collection purposes (e.g., birth and death certification), Hispanics are classified as an ethnic rather than a racial minority and are often noted in vital statistics' information as White.

The primary sources of mortality data for all racial groups are death certificates recorded by the states and used by Federal agencies such as NCHS in computing national mortality statistics. Because uniform procedures for reporting Hispanic ethnicity have not been adopted nationwide, such information is not captured on many documents including death certificates.

One effect of the lack of uniformity in noting Hispanic ethnicity is that national mortality statistics for Hispanics cannot be compiled from existing data and are therefore not available. Many states with large Hispanic populations, such as Florida and New Jersey, have no mortality data on Hispanics because ethnicity information is not required on death certificates.

To compensate for the lack of national data, the Task Force undertook a series of activities to obtain Hispanic mortality and morbidity information. The Task Force established a panel of Hispanic advisors, brought in Hispanic experts to speak to and consult with the Task Force, participated in COSSMHO and other national meetings of Hispanic health professionals, and commissioned special studies where data were available. For example, Spanish-surname data from Texas and national data on death certificates listing either Mexico or Cuba as the country of birth were used to generate information on the health problems of Hispanics compared to non-Hispanic Whites. This information provided the best indication of Hispanic health problems available to the Task Force until national data on Hispanic mortality can be collected and analyzed.

Excess deaths were calculated for three Hispanic populations: the Texas Spanish-surname, the Cuban-born, and the Mexican-born populations. Excess deaths were fewer than those found for Blacks in the 1979 to 1981 period. In the Spanish-surname population of Texas, 14 percent of all deaths were excess deaths when compared to the White non-Spanish-surname population of the State (6). Among persons of Cuban birth who died in the U.S. between 1979 and 1981, excess deaths amounted to 2.2 percent of all deaths; for the Mexican-born population, excess deaths amounted to 7.2 percent of all deaths.

The causes of excess deaths among the three Hispanic groups analyzed are similar. As seen in Table 7, homicide was the leading contributor to the disparity among both Cuban-born and Mexican-born Hispanics. No other major cause examined contributed to the excess deaths in the Cuban-born. Unintentional injuries, heart disease and stroke, cirrhosis, and diabetes appeared to be major causes of the disparity in the Mexican-born. Among the Spanish-surname population of Texas, external causes, especially motor vehicle accidents and homicide, were the primary contributors to excess death. Some differences among the three Hispanic groups may reflect the limitations in the data bases used in the separate analyses. For example, infant mortality is virtually eliminated when the analyses are limited only to the foreign-born.

These data for selected Hispanic populations suggest that the relative risks for deaths from the causes evaluated are generally lower than those of Blacks. Yet, certain causes of mortality before age 45 merit special attention. The most important of these is homicide among both Cuban-born and Mexican-born Americans, an excess also noted in the Spanish-surname data. The relative risk of death from homicide is 6.4 in Cuban-born and 5.9 in Mexican-born males under

Table 7

HISPANICS
(Foreign-Born)
Average Annual Number of Deaths by Disease Category, United States, 1979-1981

		CVD*	Cancer	Cirrhosis	Infant Mortality	Diabetes	Unintentional Injuries	Homicide	All Other	Sub-Total***	Total Deaths
Mexican-born Hispanics, Ages 0-64											
Males	Observed	585	334	136	3	32	1,322	848	554	(3,814)	3,814
	Expected**	947	622	106	39	34	769	147	727	(3,391)	3,391
	Excess	−362	−288	30	−36	−2	553	701	−173	(423)	1,284
Percent of Total Excess****		0	0	2	0	0	43	55	0		100
Females	Observed	292	367	39	2	40	184	53	309	(1,286)	1,286
	Expected**	331	512	45	28	28	186	33	357	(1,520)	1,520
	Excess	−39	145	−6	−26	12	−2	20	−48	(−234)	32
Percent of Total Excess****		0	0	0	0	38	0	63	0		100
Cuban-born Hispanics, Ages 0-64											
Males	Observed	351	243	32	0	12	143	179	204	(1,164)	1,164
	Expected**	540	337	53	1	17	172	31	268	(1,419)	1,419
	Excess	−189	−94	−21	−1	−5	−29	148	−64	(−255)	148
Percent of Total Excess****		0	0	0	0	0	0	100	0		100
Females	Observed	114	215	14	0	9	39	25	102	(518)	518
	Expected**	208	307	26	1	16	56	9	158	(781)	781
	Excess	−94	−92	−12	−1	−7	−17	16	−56	(−263)	16
Percent of Total Excess****		0	0	0	0	0	100	0	0		100

*Cardiovascular disease (CVD) combines heart disease and stroke.

**The expected number is calculated from the rate observed in the White population.

***Sub-total is the sum of negative and positive excess deaths. Total deaths sums positive excess deaths only.

****Percentages based on total deaths.

SOURCE: Duke University, analysis commissioned by the Task Force on Black and Minority Health, 1984-1985.

age 45 compared to the overall White male population under 45. For females, the comparable figures using the overall White female populations as a base are 2.4 and 1.5, respectively, suggesting that homicide is not solely a problem for young Hispanic males.

Deaths from unintentional injuries pose a risk to males who are Mexican-born under age 45, but not for the Cuban-born. The relative risk of death due to unintentional injuries for Mexican-born males under age 45 is 1.7; for females it is 1.0 (the same as White females). This result is explained to some extent by examining the relative risk of death due to cirrhosis. Mexican-born males have a 40 percent higher risk of death from cirrhosis than the White population (i.e., a relative risk of 1.4). Cirrhosis is associated with alcohol abuse and suggests that alcohol abuse in Mexican-born males may be a problem. Alcohol abuse is also suggested to play a role in higher risk of death due to accidents. Again, analysis of Spanish-surname data confirm that there are excess deaths from unintentional motor vehicle injuries.

Tuberculosis carries the largest relative risk of death under age 45 to the Mexican-born, 7.8 for males and 11.0 for females, as well as being high in Cuban-born males, 8.0. For the major killers (heart disease, stroke, and cancer), the risks of death for the Hispanic groups are less than that of non-Hispanic Whites. Overall, the risk of death under age 45 is 1.4 times greater in Mexican-born males and 1.2 times greater in Cuban-born males than Whites; however, risk of death for foreign-born Hispanic females is less than that for females under age 45 in the general, nonminority population.

Morbidity rates and health status measures for Hispanics were analyzed to investigate possible reasons for the health differences revealed by the mortality data, as was done with Blacks. Trevino and Moss (7) examined a number of health status indicators from the NHIS, including physician and dental visits, hospital stays, disability days, acute conditions, and activity limitations due to chronic conditions, for Hispanics, Blacks, and non-Hispanic Whites in the period 1978 to 1980. The size of the Hispanic sample in NHIS, however, is too small to generalize to the Hispanic population when age, sex, Hispanic origin (Cuban, Mexican, and Puerto Rican) and health condition are taken into account, as must be done to get results meaningful to the charge of the Task Force.

The only statistically significant results reported in the analysis of the NHIS data are prevalence rates of digestive conditions among Puerto Rican females ages 25-44, which are 2.2 times greater than those in non-Hispanic Whites. Skin and musculoskeletal conditions among Cuban females are twice as high as those among White non-Hispanics. Other results suggest that Hispanics in the NHIS sample suffer from a number of conditions with potentially serious outcomes if left untreated, but the small sample sizes preclude generalization to the entire Hispanic population group. A better picture of the health of Hispanic Americans should be available when analyses of the Hispanic Health and Nutrition Examination Survey (HHANES) are published.

Native Americans

Table 8 shows a striking pattern of excess deaths, by age groups, among American Indians. The excess death rate of Indians under age 45 is high, at 43 percent. Of all American Indians who die before age 70, 54 percent die before age 45. Excess deaths before age 70 amount to one of every four deaths in American Indians. Eighty-seven percent of the excess deaths in American Indians occur before the age of 45. (The comparable figure for Blacks is 39 percent.)

Eighty percent of excess deaths occurring before age 45 and 99 percent of the excess deaths up to age 70 are due to six causes. These six causes, in order of greatest contribution, are: unintentional injuries, cirrhosis, homicide, suicide, pneumonia, and diabetes. Conspicuously absent are heart disease and cancer which have higher overall rates in the White population and which are considered diseases of middle and later life.

Deaths from unintentional injuries account for 48 percent of excess deaths for males and 40 percent of the excess deaths for females (up to age 45). Cirrhosis accounts for 11 percent of the male excess and 20 percent of the female excess deaths prior to age 45. Homicide accounts for 9 percent and 8 percent of the excess among American Indian males and females under age 45, respectively. From these causes, it would appear that alcohol abuse is one of the most serious contributors to premature deaths among young adult American Indians.

The risk of death for American Indians under age 45 is 1.8 times that of Whites for both sexes. Over age 45, relative risk of death for Native Americans is equal to or slightly lower than for Whites. The lower relative risk observed over age 45 might be due to a "survivor effect" similar to that among older Blacks. Causes with higher relative risks are seen in Table 9.

The extremely high relative risks of death for females due to cirrhosis and tuberculosis in part reflect the low rates for White females who are the basis of the comparison. Nonetheless, these relative risks do convey the dimensions of the problem in this population. These statistics further confirm the magnitude of alcohol abuse among young American Indians of both sexes. The high risks of TB, combined with relative risks of death above 1.0 for anemia and hepatitis, probably reflect socioeconomic correlates of these diseases.

Table 8

NATIVE AMERICANS
(AMERICAN INDIANS AND ALASKA NATIVES)
Average Annual Number of Deaths by Disease Category, United States, 1979-1981

		CVD*	Cancer	Cirrhosis	Infant Mortality	Diabetes	Unintentional Injuries	Homicide	All Other	Sub-Total***	Total Deaths
Native Americans under Age 45											
Males	Observed	97	40	95	263	12	715	129	387	(1,738)	1,738
	Expected**	81	72	16	214	6	351	60	187	(987)	987
	Excess	16	−32	79	49	6	364	69	200	(751)	783
Percent of Total Excess****		2	0	10	6	1	46	9	26		100
Females	Observed	55	49	77	219	4	252	45	171	(872)	872
	Expected**	39	73	7	166	4	109	18	98	(514)	514
	Excess	16	−24	70	53	0	143	27	73	(358)	382
Percent of Total Excess****		4	0	18	14	0	37	7	19		100
Native Americans under Age 70											
Males	Observed	571	225	210	263	57	881	158	732	(3,097)	3,097
	Expected**	736	468	66	214	26	412	70	435	(2,427)	2,427
	Excess	−165	−243	144	49	31	469	88	297	(670)	1,078
Percent of Total Excess****		0	0	13	5	3	44	8	28		100
Females	Observed	298	216	156	219	69	302	52	397	(1,709)	1,709
	Expected**	319	398	32	166	22	134	21	245	(1,337)	1,337
	Excess	−21	−182	124	53	47	168	31	152	(372)	575
Percent of Total Excess****		0	0	22	9	8	29	5	26		100

*Cardiovascular disease (CVD) combines heart disease and stroke.

**The expected number is calculated from the rate observed in the White population.

***Sub-total is the sum of negative and positive excess deaths. Total deaths sums positive excess deaths only.

****Percentages based on total deaths.

SOURCE: Duke University, analysis commissioned by the Task Force on Black and Minority Health, 1984-1985.

Table 9

Relative Risk of Death for American Indians by Cause*

Cause	Relative Risk	
	Male	Female
Cirrhosis	6.1	11.1
Tuberculosis	8.5	9.8
Chronic Renal Disease	2.7	4.7
Unintentional Injuries	2.1	2.4
Drowning	2.8	2.4
Homicide	2.2	2.6
Diabetes	2.2	1.1

SOURCE: Duke University analysis commissioned for the Task Force, 1984.
*NCHS microdata mortality tapes and 1980 U.S. Census population at risk.

Too few Native Americans are sampled in the NHIS to derive population-level prevalence estimates for selected diseases and disability. The responses reported by the sample respondents tend to reflect the mortality results, but it would be misleading to attempt to extrapolate these to represent morbidity in Native Americans. The Indian Health Service (IHS) provides statistics about the population it serves, but these data are obtained from only 60 percent of the total American Indian and Alaska Native population. The data that are available, however, along with selected examples such as the high rate of diabetes among Pima Indians, indicate the existence of serious health problems. More reliable information on the Native American population is needed. Clearly, more needs to be known about environmental and psychosocial contributors to the widespread abuse of alcohol by young Native Americans if the premature loss of life in this minority population is to be prevented.

Asian/Pacific Islanders

The Asian/Pacific Island minority, in aggregate, is healthier than all racial/ethnic groups in the United States, including Whites. There are virtually no excess deaths, as seen in Table 10, when all Asian ethnic groups are combined, and Asians have a greater life expectancy than Whites. Yet, specific health problems do exist among various subgroups of this population. The Task Force explored several avenues to determine those health disparities that might be masked as a consequence of combining the subpopulations. The Task Force established an Asian advisory panel, commissioned papers from experts in the field, and visited the Chinese Hospital in San Francisco and consulted with the School of Public Health at the University of Hawaii.

Table 10

ASIAN/PACIFIC ISLANDERS
Average Annual Number of Deaths by Disease Category, United States, 1979-1981

		CVD*	Cancer	Cirrhosis	Infant Mortality	Diabetes	Unintentional Injuries	Homicide	All Other	Total Deaths
Asians under Age 45										
Males	Observed	148	140	15	300	4	378	108	271	1,364
	Expected**	240	195	49	405	14	823	152	483	2,361
	Excess	−92	−55	−34	−105	−10	−445	−44	−212	−997
Females	Observed	83	176	3	252	3	152	49	199	924
	Expected**	107	221	22	309	13	260	48	271	1,251
	Excess	−24	−45	−19	−57	−10	−101	1	−72	−327
Asians under Age 70										
Males	Observed	1,083	873	73	300	51	476	142	642	3,640
	Expected**	2,142	1,344	190	405	72	999	181	1,208	6,541
	Excess	−1,059	−471	−117	−105	−21	−523	−39	−566	−2,901
Females	Observed	506	732	31	252	46	216	58	451	2,292
	Expected**	914	1,182	96	309	68	335	57	704	3,665
	Excess	−408	−450	−65	−57	−22	−119	1	−253	−1,373

*Cardiovascular disease (CVD) combines heart disease and stroke.

**The expected number is calculated from the rate observed in the White population.

NOTE: Percent of total excess was not calculated in this table because excess deaths were virtually all negative.

SOURCE: Duke University, analysis commissioned by the Task Force on Black and Minority Health, 1984-1985.

The University of Hawaii is conducting a major study of the health status of Americans in the Pacific. Preliminary results indicate that, compared to Caucasians in Hawaii, Native Hawaiians experience excess deaths for heart disease, cancer, diabetes, infant mortality, and accidents. Cancers of the stomach and lung are particularly high relative to Whites. Excess deaths due to accidents are believed to result from the riskier occupations of Native Hawaiians, relative to Whites.

The primary morbidity problems found in Native Hawaiians include heart conditions, hypertension, diabetes, asthma, gout, and back problems - results in keeping with the mortality findings. The University of Hawaii study also applied "excess deaths" methodology to the Pacific Island territories, but the vital statistics in those territories were inadequate to report findings (8).

The Task Force analysis of national mortality data for Asian/Pacific Islanders under age 45 indicates that the relative risk of death for almost every cause is low. Although the risk of death for all causes is a third lower than that of Whites, Asian/Pacific Islanders have higher rates for TB, hepatitis, anemia, and hypertension. The importance of the increased risk indicated by relative risk for hypertension, though not large (1.2 for males and 1.3 for females), cannot be ignored because of the impact of hypertension on other diseases.

An analysis by Yu, Chang, Liu, and Kan (3) commissioned by the Task Force provides results of excess death analyses for the three major Asian subgroups: Chinese, Japanese, and Filipinos. The authors emphasize the lack of data for other Asian/Pacific Islander subgroups, such as Southeast Asians and Native Hawiians, whose health status is believed to be poorer than that of those Asians for whom data are available. The study found no "substantial amount of excess deaths for a majority of the causes of death...[with the only consistent pattern being]...the high suicide rate of Chinese women vis-a-vis White women." Differences in socioeconomic status, culture, and lifestyle are hypothesized to explain the lower relative mortality of Asian/Pacific Islanders in the United States. The extremely low relative risks of death for causes generally associated with cigarette smoking and alcohol consumption bolster this claim. The lower mortality rates were analyzed separately for the Chinese, Japanese, and Filipinos, with the same generally favorable outcome relative to Whites for each.

Relative risks of selected causes of morbidity based on prevalence rates from the NHIS are unavailable. Fewer than 5,000 Asian/Pacific Islanders were sampled in the period 1979 to 1981. When age, sex, and cause of illness are examined, the number of responses on which to base population estimates is insufficient.

Papers by True (9), Yu, Chang, Liu, and Kan (3), and by Yu, Liu, and Kurzeja (10), commissioned for the Task Force, examine the health problems of immigrant and ethnic groups within the Asian population more closely. Cultural differences and language difficulties are major barriers for immigrants and refugees for using existing health services in the areas where they reside. Additionally, for almost every age group, the death rates for foreign-born Chinese, Japanese, and Filipinos are higher than for native-born Americans of these same subgroups.

As a group, the Asian/Pacific Island population in the United States is at lower risk of early death than the White population. There are, however, specific diseases for which this population is at higher risk. There are also significant subgroups in this population, e.g., Southeast Asians, other recent immigrants and refugees, and Native Hawaiians and Pacific Islanders, who have specific health problems that are not reflected in national data. These issues are discussed in more detail in Subcommittee reports found in a later volume of this report.

Summary

The data reviewed by the Task Force clearly show that Blacks have the greatest disparity in mortality and morbidity among the minorities as compared to Whites. This disparity is evident in life expectancy at birth, and is reflected in excess deaths as well as other measures of mortality and morbidity. Data for Hispanics cover only a limited segment of this minority; they do, however, indicate disparities in mortality. National mortality data, including the calculation of excess deaths and relative risks, indicate major areas of disparities between Native Americans and the White majority, perhaps most prominently due to several causes related to alcohol abuse. When data from many of the Asian/Pacific Islander subgroups are aggregated, a negligible disparity only is evident. However, data from the individual ethnic subgroups, when considered separately, suggest a different picture--one of a range of health problems and disparities in certain subgroups.

The data used in compiling other health indicators for minority groups are uneven and far from complete. Nevertheless, the results provide a basis from which further data collection efforts and analyses may be made. Data on morbidity and other health status indicators in the four minority groups are: the most complete and accurate for Blacks; very limited for Asian/Pacific Islanders; available for American Indians and Alaska Natives living on or near reservations (through the Indian Health Service); and available on Hispanics through the surveys of NCHS, primarily the NHIS and the HHANES. The data currently available for Asian/Pacific Islanders and Hispanics may be weighted toward the larger, more established, healthier, ethnic groups within these minorities, rather than the less settled, immigrant and refugee subgroups.

Homicide, unintentional injuries, and alcohol abuse, a precursor to cirrhosis, stand out as primary causes of the disparity in mortality that are amenable to health promotion and education programs. Similarly, infant mortality rates in minorities may be improved with increased availability of prenatal counseling and services. Positive results of such services among the American Indians are already reflected in IHS statistics on neonatal deaths, although postneonatal deaths remain a problem.

Hypertension, a subject of major public health initiatives at present, clearly is an area deserving continued emphasis in the minority population. Diabetes is another significant health problem for Blacks, American Indians, and Hispanics. The magnitude of the diabetes problem is often underestimated because mortality statistics understate the relationship of the disease to other health problems, especially as a risk factor for cardiovascular disease. Yet, the complications of diabetes can be controlled by intervention efforts.

Only limited information exists to determine the possible association between health status and socioeconomic factors, such as income and education. Greater awareness of this relationship would make it possible to target existing resources more effectively toward the areas of greatest need in the various minority populations at risk.

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Accounting For the Health Status Disparity

Subcommittee Summary Reports

SUBCOMMITTEE ON CANCER

EXECUTIVE SUMMARY

Introduction

This report examines cancer mortality in minorities, with particular emphasis on factors that contribute to excess mortality; i.e., cancer incidence and survival, risk factors/exposures, health resources, and other factors. The report illustrates the complex relationship among cancer incidence, survival, and mortality for minorities and nonminorities.

Patterns of cancer distribution among U.S. population groups vary according to racial and ethnic background. In examining these differences, this report looks at information regarding incidence, mortality, and survival; information relating to prominent factors that are risks for cancer development; and information on knowledge, attitudes, and practices regarding cancer that influence care-seeking behavior. In short, differences in cancer experience among minorities and factors that may contribute to the differences between minorities and nonminorities are discussed.

Risk factors are discussed because they are critical to the understanding of endogenous and exogenous conditions that may predispose a person to cancer development. Major risk factors--tobacco, the combined effects of tobacco and alcohol, nutritional and dietary factors, and occupation--account for approximately 72 percent of cancer mortality and 69 percent of incidence (1).

Socioeconomic status is also an important factor in cancer incidence and survival and, therefore, mortality. Socioeconomic status is related to a variety of factors which influence cancer experience, including: nutritional status; smoking patterns; distribution, quality, and use of health resources; and knowledge, attitudes, and practices. Lower socioeconomic status has been correlated with poorer survival from cancer (2,3). It is also related to increased cancer incidence for cancers of the lung, breast, and cervix (4).

Most statistics relating to cancer incidence and survival rates are derived from the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute (5). The SEER Program obtains cancer patient incidence and survival information from 11 population-based cancer registries that cover more than 13 percent of the U.S. population. Within the racial and ethnic groups in the United States, SEER data cover 12 percent of nonminorities, 12 percent of Blacks, 27 percent of Native Americans, 32 percent of Chinese, 47 percent of Japanese, 38 percent of Filipinos, 12 percent of Hispanics, and 31 percent of "other". The areas covered by SEER include five states (Connecticut, New Jersey, New Mexico, Utah, and Hawaii), four metropolitan areas (Atlanta, Detroit, San Francisco, and Seattle), and the Commonwealth of Puerto Rico. SEER data on Hispanics in this report, however, refer only to those Hispanics living in the United States. Mortality data are derived from the National Center for Health Statistics (NCHS) through the national vital statistics' system. This system classifies Hispanics as Whites, and therefore no death statistics on Hispanics are presented. Most of the indepth analysis underlying this report is limited to Blacks and Whites. The reason for this is that the number of cancer cases is too few in the other minority groups to permit meaningful statistical analysis.

Risk Factors and Exposures

Risk factors and exposures are important in explaining and accounting for the initiation and/or rise of cancers in minority and nonminority populations.

The major risk factors/exposures that account for 72 percent of all cancer deaths are tobacco, dietary/nutritional factors, occupation, and ethanol, as seen in Table 11 (1). Of these, tobacco is the greatest risk factor for cancer for Blacks.

Table 11

Proportion of Cancer Deaths Attributed to Different Factors

Factors	Estimated Percent of All Cancer Deaths
Tobacco	30%
Alcohol	3%
Diet	35%
Occupation	4%

SOURCE: Doll and Peto, *The Causes of Cancer* (1).

Tobacco-related cancers account for approximately 45 percent of new cancer cases (incidence) in Black males, 25 percent in Black females, and approximately 37 percent of cancer deaths in Black males and 20 percent in Black females.

Examination of tobacco use patterns indicates a higher prevalence of smoking in Blacks compared to Whites. However, Blacks tend to be lighter smokers (fewer pack years) than Whites. In view of these patterns, the contribution of other risk factors (e.g., diet and occupation and their combined effects with tobacco) gain added importance, particularly in explaining excess lung cancer mortality in Black males.

The contribution of occupational exposures to cancer etiology in minorities may be even greater than the 4 percent listed in Doll and Peto (1). Numerous occupational epidemiology studies document the higher rate of assignment of Blacks to hazardous worksites compared with rates for Whites. This fact, coupled with the excessive cancer experiences of Blacks, suggests occupation may likely account for a greater percentage of cancers in minorities than previously appreciated (6).

Knowledge, attitudes, and practices are important to understanding factors that relate to people seeking care for cancer (cancer screening, detection, treatment, and rehabilitation). National surveys indicate that Blacks overestimate the deadliness of cancer and underestimate cancer prevalence in their population. Additionally, Blacks are less knowledgeable about cancer-related warning signs and screening methods than Whites. Even with early detection, Blacks are more pessimistic about the curability of cancer than Whites (7). Such disparities in knowledge, attitudes, and practices between Blacks and nonminorities may help to explain the longer delay in seeking diagnosis and treatment among Blacks and thus the greater prevalence of more advanced stages of cancer in Blacks than in Whites (5). More advanced stages of cancer have unfavorable prognosis for cancer survival.

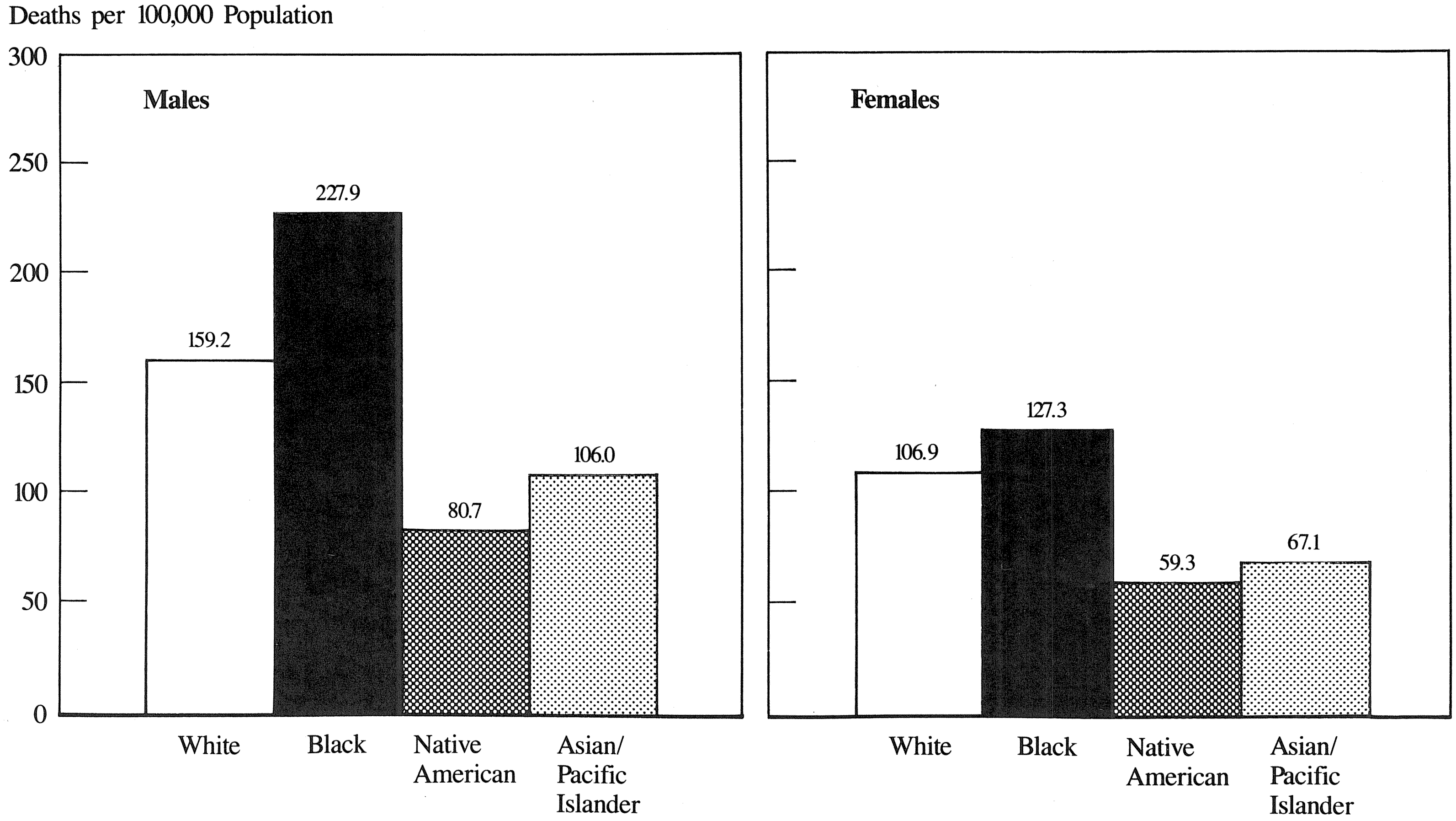
Cancer in Minority Groups

Blacks are the largest minority population in the United States and the one for which the most cancer data are available. However, where relevant reliable information is available for other minority groups--Hispanics, Asian/Pacific Islanders, and Native Americans--it will be presented. Blacks have the highest overall age-adjusted cancer rates for both incidence and mortality of any U.S. population group. Figure 6 illustrates the average annual mortality rate for cancer, by sex and race.

Table 12 shows the average annual incidence rates (detecting new sites of cancer) according to selected primary sites and racial/ethnic groups. The most recent SEER cancer incidence data, 1978-81, show an 11 percent excess incidence of cancer among Black Americans compared with nonminority Americans. The age-adjusted incidence rate is 25 percent higher among Black males compared with nonminority males, and 4 percent higher among Black females compared with nonminority females. Black men showed the largest increase (8 percent) in cancer mortality between 1973-77 and 1978-81.

Figure 6

Average Annual Age-Adjusted Death Rates for Cancer, 1979-1981



NOTE: Death rates for Hispanics are not available. Death rates for Native Americans and Asian/Pacific Islanders are probably underestimated due to less frequent reporting of these races on death certificates as compared with the Census.

SOURCE: National Center for Health Statistics, Bureau of the Census, and Task Force on Black and Minority Health.

Table 12

CANCER INCIDENCE RATES

Average Annual Age-Adjusted (1970 U.S. Standard) Cancer Incidence Rates by Primary Site and Racial/Ethnic Group

Selected Primary Sites	Non-Hispanic White	Blacks	Hispanics	Chinese	Japanese	Filipino	Hawaiians*	Native Americans*
All Sites	335.0	372.5	246.2	252.9	247.8	222.4	357.9	164.2
Esophagus	3.0	11.5	1.6	3.4	2.4	3.6	6.4	2.4
Colorectal	49.6	48.9	25.2	40.8	50.4	30.1	32.7	9.9
Colon	34.6	37.9	15.8	27.7	34.0	17.7	18.4	8.0
Rectum	15.0	11.7	9.4	13.1	16.4	12.4	14.3	1.9
Pancreas	8.9	13.6	10.8	9.3	7.4	6.7	10.0	6.0
Larynx	4.6	6.6	2.6	1.9	2.6	1.8	5.2	0.9
Lung								
Male	81.0	119.0	34.3	62.6	45.1	38.1	100.9	14.5
Female	28.2	30.5	13.0	31.2	14.1	18.4	38.6	3.1
Breast	85.6	71.9	54.1	54.0	53.1	43.4	111.1	28.5
Cervix	8.8	20.2	17.7	11.2	7.6	8.8	14.1	22.6
Prostate Gland	75.1	120.3	76.5	26.1	44.2	48.9	57.9	45.4
Multiple Myeloma	3.4	7.9	2.5	1.6	1.2	4.1	5.5	2.8

NOTE: Rates per 100,000 population.

SOURCE: Surveillance, Epidemiology, and End Results Program (SEER), 1973-1981.

*The SEER program defines Hawaiian as Native Hawaiian.or part Native Hawaiian. Native Americans refer to American Indians and Alaska Natives.

Blacks experience greater age-adjusted incidence rates than nonminorities for cancers of the cervix, esophagus, larynx, pancreas, prostate, and stomach. Excess mortality exists for cancers of the following sites: bladder, cervix, corpus uterus, esophagus, lung, prostate, and stomach. Excess incidence and mortality are particularly pronounced among Black males.

SEER data are available for 25 primary cancer sites. Blacks have lower survival rates than nonminorities for 22 of those cancers (5). Five-year relative survival for all cancer sites combined is 12 percent less in Blacks than in Whites (38 percent versus 50 percent, respectively). Blacks survive less for cancers of the bladder, breast, corpus uterus, prostate, and rectum.

Blacks

Table 13 shows average annual cancer mortality rates by selected primary sites and race. The death rate for lung cancer is 45 percent higher among Black males compared to nonminority males. The death rate for both Black and nonminority females is about equal. For cancer of the esophagus among Black males, mortality is three times higher than for nonminority males. Mortality rates among Black women are 2.5 times higher than for nonminority women. Age-adjusted incidence rates of esophageal cancer are correspondingly high: 3.5 times higher for Black men compared with nonminority men, and almost 3 times higher in Black women than nonminority women. Mortality from stomach cancer is more than 1.5 times greater among Blacks than among nonminorities. Stomach cancer incidence is almost twice as high among Blacks compared with nonminorities.

Age-adjusted mortality from prostate cancer is two times higher among Black males than among nonminority males. The death rates increased by 11.8 percent among Blacks and only 4.2 percent among nonminorities between the periods 1973-77 and 1978-81. Incidence data show that Black men have a 60 percent excess incidence of prostate cancer compared with nonminority men in the United States.

Both mortality and incidence rates for cervical cancer are approximately 2.5 times higher among Black females than among nonminority females. Nonminority females showed a 20 percent decrease in cervical cancer deaths between 1973-77 and 1979-81, while Black females experienced a 27 percent increase during this same period. Black females experienced a 33 percent excess death rate from cancers of the corpus uteri compared with nonminority females.

The incidence of multiple myeloma is more than twice as high for Blacks than for nonminorities. The incidence for Black men is 9.6 per 100,000 and for Black women it is 6.7. The rate for nonminority men is 4.3, and for nonminority women it is 3.0.

Table 13

CANCER MORTALITY RATES
Average Annual Age-Adjusted (1970 U.S. Standard) Cancer Mortality Rates by Primary Site and Racial/Ethnic Group

Selected Primary Sites	Non-Hispanic White	Blacks	Chinese	Japanese	Filipino	Hawaiians*	Native Americans*
All Sites	163.6	208.5	131.5	104.2	69.7	200.5	87.4
Esophagus	2.6	9.2	3.3	1.9	1.9	6.5	2.1
Colorectal	21.6	22.3	19.3	17.2	8.1	15.0	8.6
Colon	18.1	18.8	15.5	13.6	5.8	11.4	6.8
Rectum	3.5	3.5	3.8	3.6	2.3	3.6	1.8
Pancreas	8.4	11.0	7.4	7.0	3.3	10.9	4.5
Larynx	1.3	2.5	0.7	0.2	0.4	1.4	0.9
Lung							
Male	69.3	91.4	48.2	32.7	20.0	88.0	28.0
Female	20.2	20.1	21.2	8.6	6.8	31.5	8.6
Breast	26.6	26.3	13.0	9.9	8.0	33.0	8.2
Cervix	3.2	8.8	2.9	2.7	1.6	4.2	5.8
Prostate Gland	21.0	43.9	7.5	8.8	8.2	11.6	15.5
Multiple Myeloma	2.4	5.0	1.2	1.2	1.2	2.8	1.9

NOTE: Rates per 100,000 population.
SOURCE: Surveillance, Epidemiology, and End Results Program (SEER), 1978-1981.
*The SEER program defines Hawaiian as Native Hawaiian or part Native Hawaiian. Native Americans refer to American Indians and Alaska Natives.

There are striking differences in Black/nonminority survival for cancers of certain sites. Table 14 shows relative 5-year survival rates for selected sites of cancer. The 5-year relative all-site survival rate for 1976-81 was 50 percent for nonminorities and 38 percent for Blacks. Of the 25 primary cancer sites for which survival data were available, Blacks had better 5-year relative survival than non-minorities for only three sites--ovary, brain, and multiple myeloma--all relatively low-incidence cancers. Black patients had better survival rates than nonminorities for ovarian cancer for all stages combined and also within each stage category.

The breast cancer survival difference (Blacks, 63 percent; nonminorities, 75 percent) was statistically significant. This was partly related to the large number of Blacks who had lymph node involvement or direct extension of tumors to adjacent tissue at the time of diagnosis (stage III B). The difference in 5-year relative survival rates for Blacks and nonminorities for all stages combined for colon cancer and bladder cancer was significant, with Blacks experiencing lower survival rates.

The scientific literature supports a hypothesis that the differences in cancer experience between nonminorities and Blacks may be largely attributable to social or environmental factors rather than inherent genetic or biologic differences (4,8,9). This has major policy ramifications for the accessibility, availability, utilization, quality, and continuity of health resources, for example, state-of-the-art cancer screening, detection, treatment, and rehabilitation. Other possible contributors include: nutritional status and dietary patterns; immune status and function; educational level and attitude, and awareness of cancer preventive concepts and behaviors; and acceptance of cancer as a real and potential threat.

When adjustments are made for stage at diagnosis in cancer patient survival studies, survival differences decrease between Blacks and nonminorities (10), and when adjustments for socioeconomic status are made, the disparities between the two groups are further reduced (2,3,8,11). Factors that may contribute to poor cancer survival in Blacks include lower socioeconomic status (11), later stage at diagnosis, delay in detection and treatment (10), treatment differences (12) and biologic factors such as immune competence and response, histologic patterns of tumors, and nutritional status (13).

Hispanics

Overall age-adjusted cancer incidence rates for Hispanics are lower than for Blacks or nonminorities. Specific sites of excess incidence among Hispanics are stomach, prostate, esophagus, pancreas, and cervix cancers. Stomach cancer incidence in Hispanics is twice that of nonminorities. Stomach cancer incidence has been correlated with diets high in smoked, pickled, and spiced foods--especially those high in N-nitroso compounds. Tobacco also has been suggested as a risk factor in stomach cancer development. New Mexico Hispanics have

Table 14

FIVE YEAR RELATIVE SURVIVAL RATES, 1973-1981 (Percentage)

Primary Sites	Non-Hispanic White	Hispanics	Blacks	Chinese	Japanese	Filipino	Hawaiians*	Native Americans*
All Sites	50	47	38	44	51	45	44	34
Esophagus	5	—	3	11**	—	—	—	—
Stomach	14	16	15	16	28	16	14	9
Colorectal	51	46	44	50	59	41	51**	37**
Colon	52	48	46	53	61	38	59**	44**
Rectum	49	44	37	44	55	45	42**	24**
Pancreas	3	2	3	3	3	2	—	—
Larynx	67	60**	59	67***	75**	57***	79***	—
Lung & Bronchus	12	11	11	15	14	12	16	5
Male	11	9	10	15	13	12	13	2
Female	16	15	14	15	17	11	24	—
Breast — Female	75	72	63	78	85	72	76	53**
Cervix	68	69	63	72**	72	72**	73**	67**
Prostate Gland	69	71	59	76**	76	73	85**	47**
Urinary Bladder	74	70	50	74**	72	49**	48***	37***
Multiple Myeloma	24	21**	27	24**	30**	29**	26**	—

SOURCE: Surveillance, Epidemiology, and End Results Program (SEER), 1973-1981.

*The SEER program defines Hawaiian as Native Hawaiian or part Native Hawaiian. Native Americans refer to American Indians and Alaska Natives.

**Standard error between 5 and 10 percent.

***Standard error > 10 percent.

pancreatic cancer rates that are higher than those of nonminorities. An upward trend also is appearing for Puerto Rican females. Excess risk for pancreatic cancer has been found among cigarette smokers. Also, cervical cancer is twice as high among Hispanics as among nonminorities. The incidence among Hispanics is, however, lower than that for Blacks, Native Americans, and Chinese Americans.

The overall 5-year relative survival rate of Hispanic males is almost identical to that of nonminorities. Hispanic females have somewhat lower survival rates than that of nonminority females. Survival data are similar for Hispanics and nonminorities for all sites except bladder cancer and Hodgkin's disease, where survival is poorer for Hispanics, and ovarian cancer, where it is poorer for White non-Hispanics (14).

Asian/Pacific Islanders

Cancer incidence varies widely among Americans of Chinese, Japanese, Filipino, and Hawaiian descent. Rates of cancer incidence among Hawaiians follow Blacks with the second highest in the U. S. population. The rates for Chinese, Japanese, and Filipinos are less than for nonminorities. There is, however, an upward trend in incidence rates for both sexes of the Chinese population and for Japanese males. Hawaiians have excess mortality for cancers of the breast and lung. Japanese Americans have excess mortality for stomach cancer. Chinese Americans have excess rates for cancer of the cervix and for nasopharyngeal cancer. Among Chinese and Japanese, rates for males are higher than those for females (15).

Stomach cancer incidence is 2.5 times higher for Japanese males and 3.8 times higher for females than for nonminority males and females. Esophageal cancer is also 2.5 times higher in Japanese males compared with nonminorities. Migratory studies of Japanese point to dietary practices as a cause in three major cancer sites: stomach, breast, and colon. Japanese females are the only U.S. minority group that does not have cervical cancer incidence rates above that of nonminorities. However, Japanese females show a trend toward higher rates.

Chinese Americans have an increased incidence of about 17 percent over nonminorities of multiple myeloma. Incidence of esophageal cancer is higher for Chinese males and females than for nonminorities. Most studies on the causes of esophageal cancer suggest that the major risk factors are smoking and alcohol consumption, with the combined use having a synergistic effect. Consumption of hot beverages also has been implicated in esophageal cancer. Pancreatic cancer incidence is about 20 percent higher among Chinese females than among nonminorities, and an upward trend in incidence exists for Chinese of both sexes. Excess risk for pancreatic cancer has been found among cigarette smokers.

Filipinos have the lowest survival of all ethnic groups for colon cancer (35 percent) and the highest for ovarian cancer (35 percent). Hawaiians experienced comparatively high survival rates for lung, breast, prostate, and cervix cancer and comparatively lower survival rates for ovarian (38 percent) and corpus cancers (76 percent).

SEER registry data (1973-79) indicate that for Chinese Americans the 5-year relative survival for all sites was 35 percent in males and 50 percent in females compared with 40 percent and 55 percent in nonminorities. In Filipino Americans, site-specific relative survival rates vary widely, with some rates being the lowest of eight ethnic groups and others being much higher. Survival rates for Hawaiians also vary widely, as noted above.

Native Americans

Native Americans have the lowest rates of overall cancer incidence and mortality of all U.S. populations (including nonminorities) covered in the SEER program. Cause of death data indicate that cancer, the second leading cause of death for the U.S. population as a whole, is the third most common cause of death (preceded by accidents and heart disease) among Native Americans. In 1975, the age-adjusted mortality for cancers was 39 percent lower for this group than for the general U.S. population (16).

However, Native Americans generally had low survival rates according to 1973-79 SEER data. Overall 5-year relative survival for males was 26 percent compared with 40 percent for nonminority males, and 39 percent for females compared with 55 percent for nonminority females. Native Americans have rates below nonminorities for the most common cancers--lung, colon, breast, and prostate cancer--and much higher rates for cancers of the cervix, gall bladder, and kidney. Differences in overall cancer mortality for Native Americans and nonminorities are believed to be due more to cultural factors and environment than to genetic factors.

The lung cancer mortality among Oklahoma tribes is nine times greater than that of Southwest tribes. Environmental and cultural factors, in this case, heavy smoking among Oklahoma Indians but not among Southwest tribes, undoubtedly play a role in this discrepancy. Indians of the Southwest, who seldom smoke extensively, have low rates of squamous cell bronchogenic carcinoma--a common type of lung cancer and the one associated with heavy smoking (16).

Native Americans show excess mortality for cancer of the gall bladder. Indians of the Southwest have the greatest incidence as compared with Oklahoma Indians. The excess incidence of cancer of the gall bladder is frequently attributed to a genetic basis. Native Americans also have excess mortality from cancer of the cervix. Alaska Natives are reported to have increased incidence of cancer of the gall bladder and excess mortality from primary liver cell cancers (17).

OPPORTUNITIES FOR PROGRESS

Many of these activities, proposed by the Subcommittee on Cancer, are also applicable to the United States population in general, not just to minorities.

Information and Education

Increase the public's knowledge of the health hazards of tobacco through activities originating in the Office on Smoking and Health.

Design smoking cessation programs targeted specifically to the underserved working population (migrant workers, recent immigrants, part-time workers, shift workers).

Continue to publicize the risks of smoking and tobacco use through the Office of Cancer Communications (and its Cancer Prevention Awareness Program and other National Cancer Institute (NCI) programs).

Continue to inform the public, through the Cancer Information Service (CIS), about resources available to prevent and stop smoking and tobacco use.

Assist and promote an increased role for the NCI-sponsored Comprehensive Cancer Centers in prevention and cessation of smoking and tobacco use.

Develop joint efforts between the Federal Government and industry to develop diet and cancer programs that use mass media and other high-technology communication approaches.

Target primary care physicians and other primary care health professionals (for example, pharmacists, occupational nurses) for educational campaigns about the importance of screening and early detection. Specific educational messages for these groups should include:

- The importance of comprehensive physical examinations to detect cancers of the rectum and prostate (digital rectal examination), breast (palpation and mammography), skin (physical examination), cervix and uterus (pelvic examination and Pap smear), and endometrial sampling in high-risk females to detect uterine cancer.
- The importance of identifying and closely monitoring: high-risk individuals with aggressive follow-up where changes are apparent; any history of nonmenstrual bleeding in women, with aggressive follow-up; and family history to determine risk for breast cancer and melanoma;

- The importance of early referral for diagnosis and treatment planning.

- The fact that many forms of cancer are treatable and curable.

Emphasize through teachers' associations and appropriate clubs, lay organizations, and churches the value of screening for cancer in their efforts to inform and educate the public and their members.

Use radio and television and other media programs more effectively to present information on the value of screening for cancer. These program efforts should make special attempts to target messages to high-risk groups, such as those exposed to known carcinogens and those with a strong family history of cancer (breast cancer, ovarian cancer, and melanoma). The messages should be sensitive to the special cultural and social settings of the people who need to be reached. All public education programs should emphasize:

- The importance of early warning symptoms of cancer.

- The importance of comprehensive physical examinations.

- The appropriateness and importance both of seeking information about treatment choices and seeking referrals when appropriate.

In educational efforts regarding cervical cancer, include information on risk factors for the disease and on the importance of follow-up for abnormal bleeding, as well as on the availability and usefulness of the Pap test. The importance of pelvic examinations and follow-up for abnormal bleeding should be emphasized in public education campaigns about uterine cancers; such efforts should be targeted to postmenopausal women, especially those with lower socioeconomic status.

Public information programs about colon, rectal, and prostate cancer should emphasize:

- The high risk of these cancers for adults aged 50 and above.

- The importance of early recognition of symptoms.

Try innovative channels of communication, for example, mailing information on colon, rectal, and prostate cancer with social security checks to reach retired elderly persons, and distributing literature at retail stores and pharmacies.

Strategies for disseminating information to professionals should include all the traditional methods, such as professional meetings, journals, special continuing medical education symposia and consensus conferences, revised medical school curricula, and residency training.

Use the Physician Data Query (PDQ) system should be used as a vehicle for disseminating up-to-date cancer treatment information to physicians.

Capacity Building in the Non-Federal Sector

DHHS should work with the non-Federal sector in developing the capacity to perform periodic surveys on the prevalence of smoking to assess problems and progress.

Encourage state health agencies to develop and implement statewide, health-risk appraisals/risk reduction programs that include smoking as a risk factor.

Encourage state education departments to review and evaluate elementary and secondary school health and home economics curricula and training guides. Draw upon appropriate local and national experts to upgrade curricula to reflect newer knowledge of diet and cancer risks and strategies for risk reduction.

Encourage state and local governments to assist voluntary and private sector groups in modifying existing health promotion programs to include diet and cancer risk reduction components.

Encourage state and local agencies for agriculture, environmental protection, health, and aging to coordinate program planning activities to ensure that attention is given to reducing dietary risk factors for cancer. One such activity would be to include education and information on eating for better health and for avoiding cancer risk, and to make use of innovative approaches to reach high-risk groups.

Voluntary health organizations should continue to expand their efforts to increase the utilization of screening for cancer and should develop programs to overcome identified impediments to utilization. These groups should be the focus of other prevention activities.

As appropriate, hospitals should consider adopting mechanisms that would promote screening tests such as breast examination, the Pap smear, the stool occult blood test, and rectal examination at some time during admission or prior to completion of treatment in the emergency room for most patients.

Financing Issues

Encourage employers to include screening for cancer according to specified protocols as a component of their health care packages.

Health insurers should remind their clients about cancer screening recommendations.

Life insurers should offer rate incentives to clients who participate in recommended cancer-screening activities, and purchasers of large amounts of insurance should be encouraged to request these incentives.

Explore incentives that might offer health care providers reimbursement for comprehensive diagnostic workups, adequate clinical staging prior to treatment, appropriate multidisciplinary referrals, and application of state-of-the-art detection, treatment, and rehabilitation.

Health Professions Development

The curricula of medical students and ongoing education programs for physicians and health care providers should include information regarding the health consequences of smoking and tobacco use and prevention and cessation methods. The collaboration of medical and health professional associations (particularly associations of minority physicians and other health professionals) in this process would further facilitate this effort.

Physicians and other health care providers should be encouraged to serve as role models by refraining from tobacco use.

Physicians and other health care providers should offer interventions to heavy smokers; patients with lung disease, heart disease, cancer, or alcohol dependence; and patients in occupations with high risk for cancer.

Active cancer-screening programs for demonstration and teaching purposes should be incorporated into the educational programs of medical and other health professional schools.

Educational programs for health professionals and physicians in residency training should promote cancer screening.

Educational messages to specialty physicians should emphasize the importance of:

- Aggressive workups (radiology and endoscopy) for occult blood.
- Disease staging prior to treatment for all cancers, especially rectal, colon, breast, prostate, small-cell lung, cervical, uterine, ovarian, and skin (melanoma) cancer.

Professional oncology education should be enhanced by institutions through the Physician Data Query (PDQ) system, oncology nursing support, treatment guidelines, protocol participation, and quality assurance requirements by the Joint Commission on Accreditation of Hospitals.

Federal Leadership in Work with Other Sectors

Promote comprehensive health education, emphasizing avoidance of smoking and other high-risk behavior, from kindergarten through grade 12.

Make model smoking cessation programs available, through the Office of Smoking and Health, to students, faculty, and staff of interested educational institutions.

The establishment of a "peer corps" of high-school seniors interested in practicing health promotion should be encouraged; these students could be given incentives such as scholarships and could play a significant role in smoking prevention and cessation at the local level.

Explore collaborative efforts between DHHS and such associations as health maintenance organizations, the American Hospital Association, and local hospitals to develop hospital-based cessation and prevention programs. These organizations could participate in efforts to discourage the sale of cigarettes in hospitals, nursing homes, other health care facilities, and pharmacies.

Corporate and union leaders should collaborate to develop and promote model nonsmoking standards as an integral part of worksite health promotion and fitness programs.

Insurance companies should be encouraged to establish and expand nonsmoker differential rates for health, life, and home insurance.

Schools and programs of occupational medicine should be encouraged to include smoking cessation in their educational programs.

Federal meat and milk grading programs should work with producers to expand production and marketing of leaner, low-fat products. For example, the red meat industry has proposed new grading standards that permit the choice and prime grades to be leaner, which would result in less fat in American diets.

Senior citizen organizations should seek health care organizations that provide low-cost but technically skilled screening programs and should actively encourage their members to use these screening programs.

Research Issues

Promote close collaboration in research by developing a network among smoking intervention researchers funded by the NCI Smoking, Tobacco, and Cancer Program.

Involve NCI-sponsored researchers of smoking interventions in NCI year 2000 activities, especially the application of findings that come from their research.

Intensify research on selective livestock breeding to produce leaner food products.

Conduct research to enhance the quality and desirability of fiber-rich foods, including cereals and breads.

The NCI should support research on cancer screening technology and on utilization of screening techniques.

Data

To track progress in controlling cancer in all populations and especially in the minorities, baseline information and monitoring on a regular basis of the following indicators should be undertaken: incidence, mortality, stage at diagnosis, and relative survival by cancer site; percent of adults and children who smoke and for former smokers, the time since quitting; the percent of fat and fiber in the diet and the percent who are obese; the percent of eligible persons who are screened for cancer; percent of cancer patients treated by state-of-the-art methods; percent of workers exposed to carcinogens in the workplace as well as the percent of those who are screened in the workplace; and the percent of the population and ethnic groups with particular knowledge, attitudes, and beliefs about cancer.

Improve surveillance and registration of occupational exposure. Link registration to current cancer surveillance systems.

Improve the timeliness of mortality data reported by the NCHS so that data for a given year will be available by the end of the following year.

Obtain data on smoking habits on an annual basis and on knowledge and beliefs about cancer on a biennial basis through the National Health Interview Survey (NHIS).

NCI should take the lead in helping population-based cancer registries achieve compatibility with SEER and help them to improve data quality.

Augment existing national surveys rather than conduct new ones.

The Centers for Disease Control should explore the possibility of using the Morbidity and Mortality Weekly Report or the 121 City Mortality System for monitoring cancers that are amenable to rapid intervention.

Continue the longitudinal study of the Current Population Survey sample matched to the National Death Index.

Explore the possibility of NCI including additional items in SEER such as detailed treatment information and socioeconomic status information.

Install a data collection mechanism in SEER areas to obtain additional information from medical records or through slide review as specific questions arise.

Supplement ongoing population surveys (preferably the NHIS) with questions on cancer screening.

Consider including one or more questions on smoking in the 1990 census.

Conduct special surveys, under the direction of NCI, to obtain data on the general population in specific geographic areas.

Conduct population surveys to obtain detailed data for various surveillance indicators in SEER areas or in other areas with population-based cancer registries so that indicators can be correlated with measures of outcome.

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SUBCOMMITTEE ON CARDIOVASCULAR AND CEREBROVASCULAR DISEASES

EXECUTIVE SUMMARY

Introduction

This report reviews cardiovascular and cerebrovascular diseases in Black Americans and, to a lesser extent because of the paucity of information, in Hispanics, Native Americans, and Asian/Pacific Islanders. Heart diseases and stroke cause more deaths, disability, and economic loss in the United States than any other acute or chronic diseases and are the leading causes of days lost from work. This observation is true, not only for the general population, but for each of the four minority populations in this report (1,2,3). The data to extend this statement to the many subgroups of each minority do not exist, but cardiovascular disease (CVD) remains an unquestionably important health issue for each.

Even though currently available data are insufficient for excess deaths to be calculated for each minority population, average annual death rates for heart disease are higher in Black men and women under age 70 than in comparable Whites. Under 45 years of age, the rates for Native Americans, as well as for Blacks, are higher than they are for Whites, in both genders (Figures 7 and 8).

Dramatic differences exist between the levels of the various CVD risk factors both when minority populations are compared with each other and also when each is compared with the White population. The leading treatable risk factors for cardiovascular disease in the White population include hypertension, elevated blood cholesterol, cigarette smoking, diabetes mellitus, and obesity. Although the data are limited or frequently nonexistent regarding these risk factors and their importance in minority health, current wisdom suggests that a major approach to improvement of cardiovascular and general health in minorities should focus on these modifiable risk factors. Major socioeconomic differentials also exist between minorities and Whites that affect their respective life experiences, biological risk factor distributions, and access to medical care. A comprehensive model that takes into account the social context of disease is required to clarify the causes of the observed CVD disparities, to develop effective therapeutic approaches, and to enhance understanding of CVD etiology.

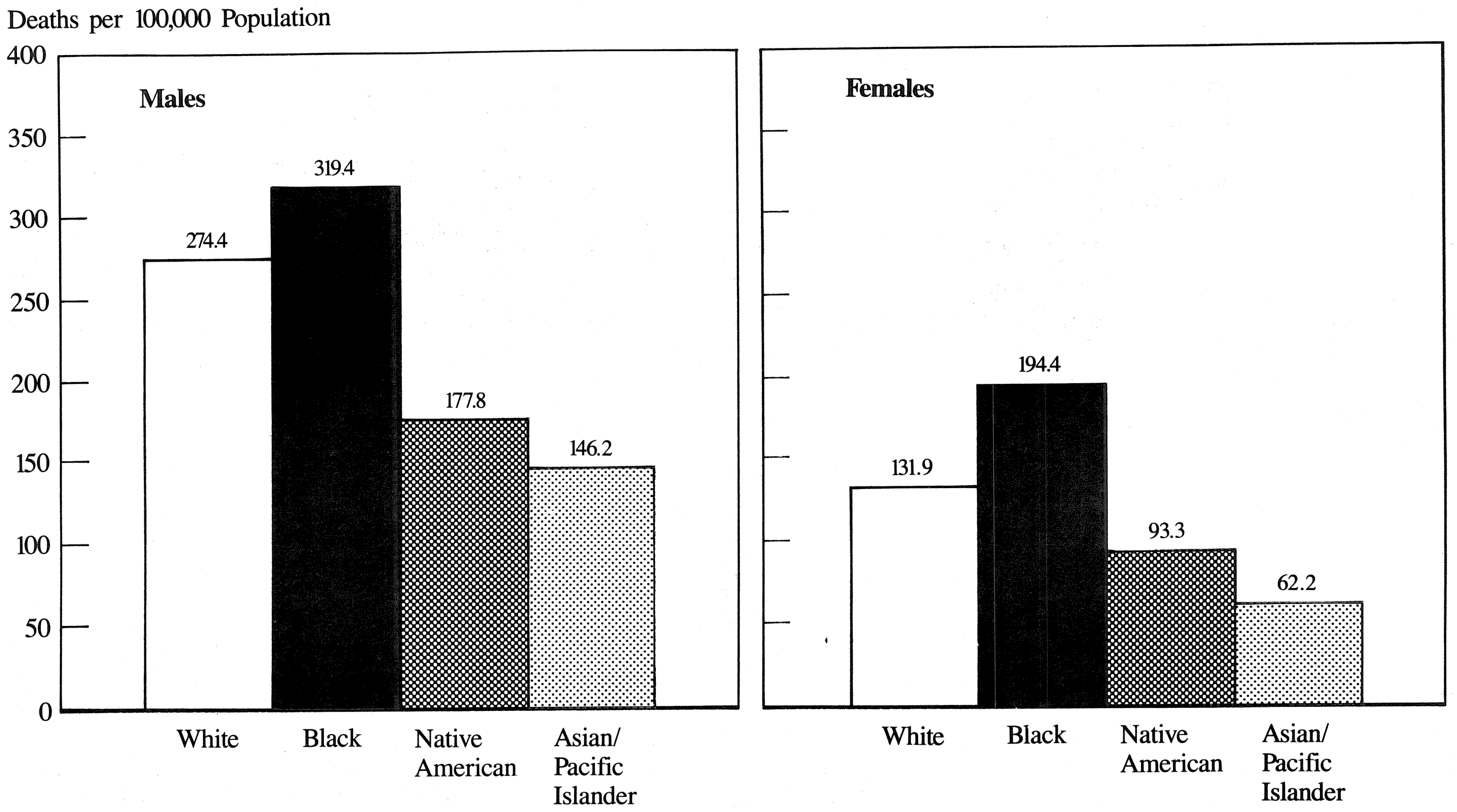
Blacks

Coronary Heart Disease

The burden of coronary heart disease (CHD) can be evaluated by several indices including: CHD mortality, prevalence (the proportion of people alive at a point in time who have a history of CHD), and

Figure 7

Average Annual Age-Adjusted Death Rates for Heart Disease, 1979-1981

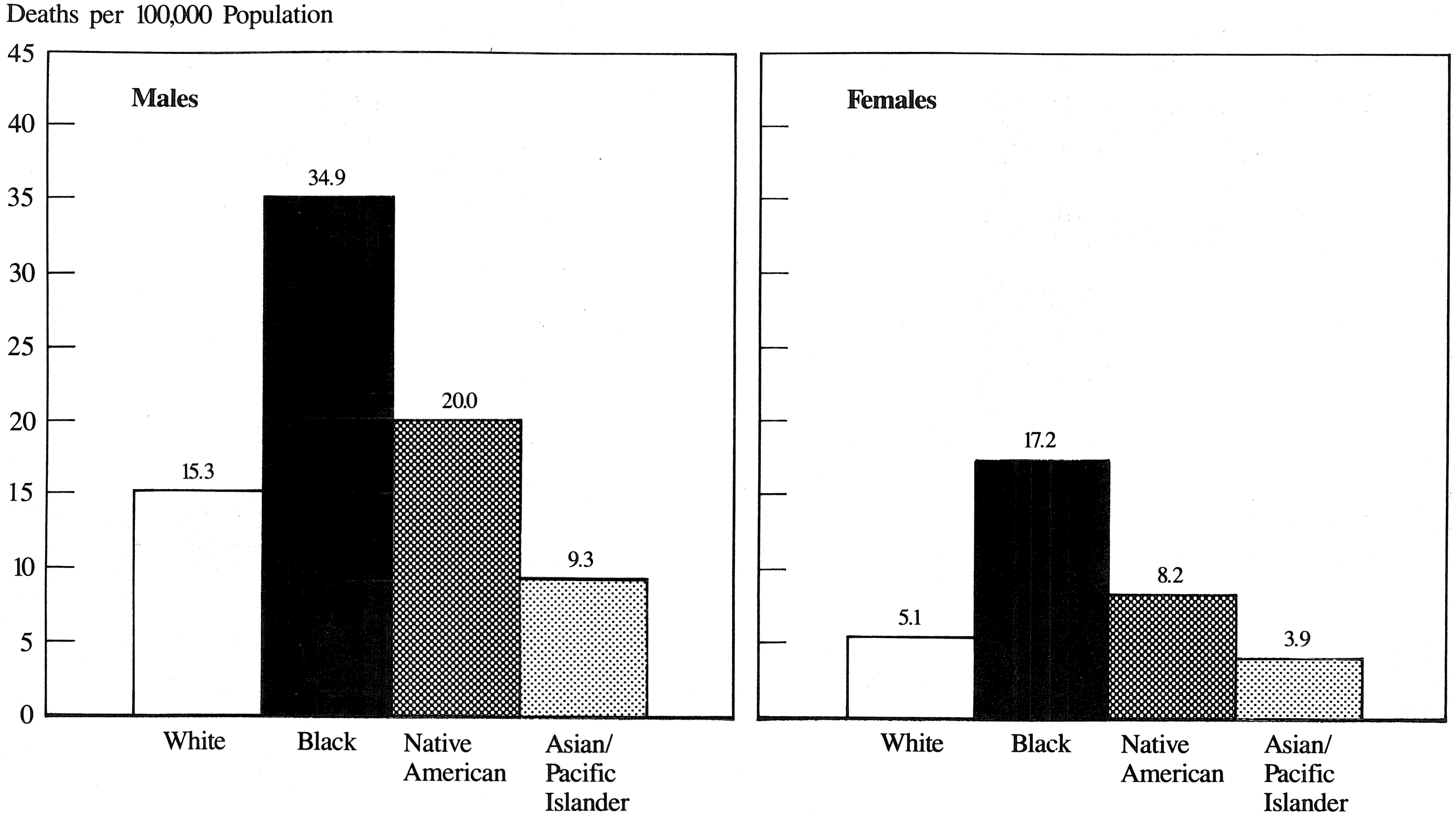


NOTE: Death rates for Hispanics are not available. Death rates for Native Americans and Asian/Pacific Islanders are probably underestimated due to less frequent reporting of these races on death certificates as compared with the Census.

SOURCE: National Center for Health Statistics, Bureau of the Census, and Task Force on Black and Minority Health.

Figure 8

Average Annual Age-Adjusted Death Rates for Heart Disease for Persons Under 45 Years of Age, 1979-1981



NOTE: Death rates for Hispanics are not available. Death rates for Native Americans and Asian/Pacific Islanders are probably underestimated due to less frequent reporting of these races on death certificates as compared with the Census.

SOURCE: National Center for Health Statistics, Bureau of the Census, and Task Force on Black and Minority Health.

incidence (the combination of fatal and nonfatal CHD events occurring over a specified period of time in a population). Curiously, these indices give different estimates of the magnitude of the problem in Blacks. CHD mortality rates are similar in Black and White men, but are greater among Black than White women (4). Incidence of CHD also shows an excess among Black women, but in several studies in the southern region of the United States, excess incidence was not found in Black men (5,6). Interestingly, the prevalence rates of CHD in Blacks and Whites appear similar (7). Finally, hospital admission records of acute myocardial infarction (MI) indicate higher rates for White than Black men which may result from higher rates of sudden death in Blacks prior to hospital admission (8).

Hypertension

Hypertension is a major risk factor for heart disease and stroke. Mean blood pressure levels are greater in Blacks than Whites with a marked excess of hypertension in Blacks (9). However, progress has been made. Between 1960-80, mean systolic pressures declined more in Blacks than in Whites (5). By 1980, Black adults were more likely to be aware of their elevated blood pressure than Whites (9). Hypertensive Blacks were at least as likely as Whites of the same sex to be treated with antihypertensive medication and nearly as likely to have their blood pressure controlled. The improved control of hypertension has almost certainly contributed to significant improvement in CVD status, and thus to the general health, of Black Americans. Despite this encouraging progress in awareness, treatment, and control of high blood pressure, there remains significant excess of hypertension in Black men and women.

Stroke mortality of Blacks declined 51 percent, and CHD mortality in Blacks declined 42 percent from 1968 to 1982. Hypertension control has certainly been one of the factors responsible for this improvement in health.

Stroke and Hypertensive End-Stage Renal Disease

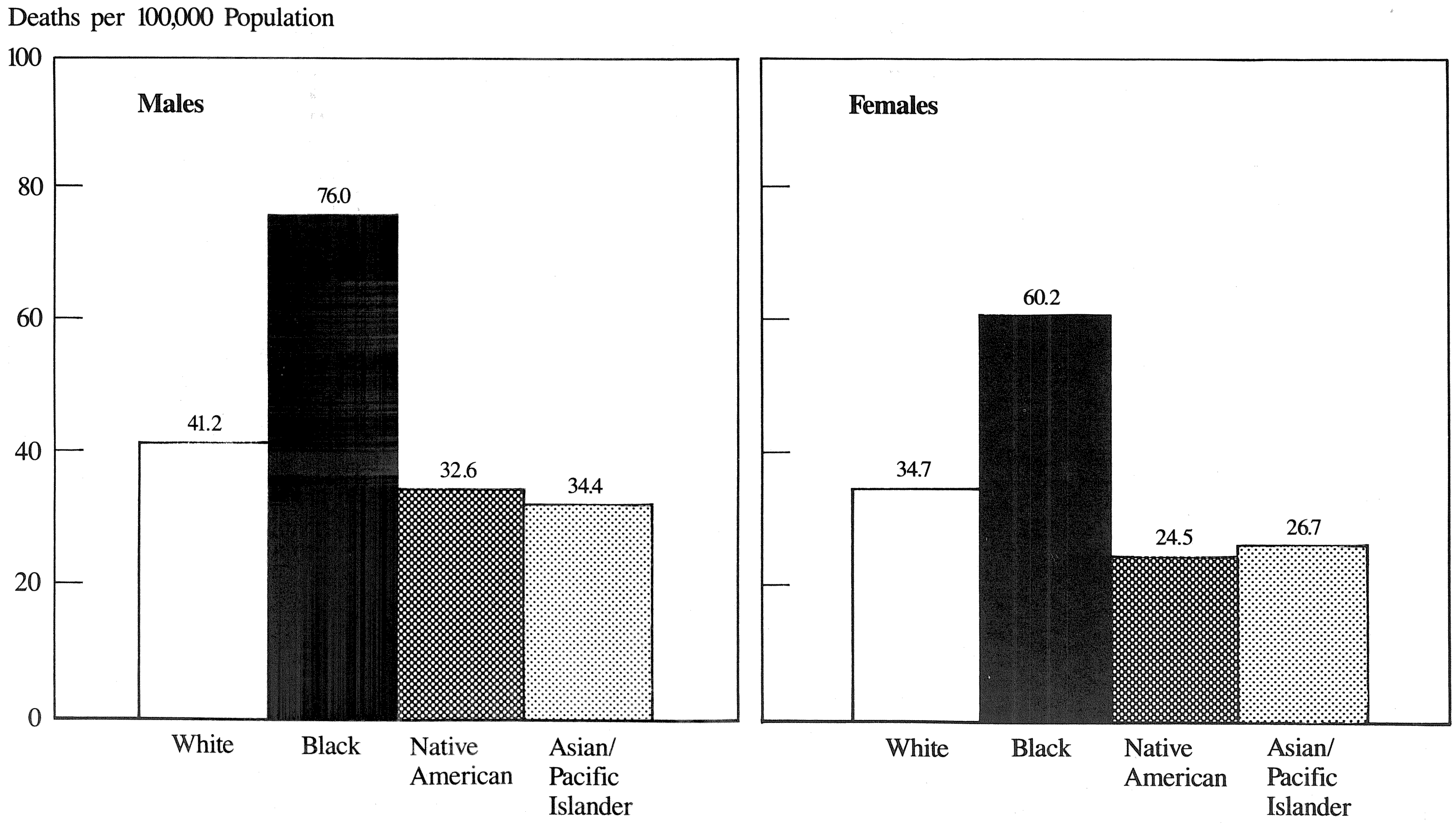
Stroke deaths are much higher among Blacks than Whites (see Figure 9); a greater proportion of Blacks than Whites suffers nonfatal strokes as well (10). End-stage renal disease (ESRD), resulting from hypertension, occurs more commonly in Blacks than Whites (11); Blacks with hypertension are at much greater risk of developing ESRD than Whites. Interestingly, Blacks with hypertensive ESRD who receive treatment with dialysis have a more favorable cardiovascular mortality outlook than Whites who receive treatment.

Other Cardiovascular Risk Factors

Mean total serum cholesterol levels in Black and White adults are similar (12). High-density lipoprotein (HDL) cholesterol levels are consistently higher in Black men than White men, but the same is not true for women.

Figure 9

Average Annual Age-Adjusted Death Rates for Stroke, 1979-1981



NOTE: Death rates for Hispanics are not available. Death rates for Native Americans and Asian/Pacific Islanders are probably underestimated due to less frequent reporting of these races on death certificates as compared with the Census.

SOURCE: National Center for Health Statistics, Bureau of the Census, and Task Force on Black and Minority Health.

Smoking appears to increase the risk of CVD mortality similarly in Blacks and Whites (13). Cigarette smoking prevalence is greater among Black than White men, but the prevalence of heavy smoking is greater among White than Black adults (14,15).

The impact of cigarette smoking and elevated serum cholesterol levels on heart disease mortality is similar in Blacks and Whites, although the effect of hypertension appears to be less in Blacks than Whites (13). Smoking cessation and prevention, and cholesterol reduction in Blacks should reduce the incidence of heart disease.

The prevalence of diabetes mellitus, both diagnosed and undiagnosed, is greater among Blacks than Whites (16). However, the effects of diabetes mellitus on CVD in Black Americans have not been assessed adequately.

Obesity is also common in Black women and may provide a partial explanation for their excess coronary disease risk (17).

Electrocardiographic abnormalities have been found to be predictive of CHD in White patients (18). Such abnormalities are more common in Blacks than Whites (13,19). The impact of these abnormalities, especially electrocardiographic evidence of left ventricular hypertrophy (ECG-LVH), has not been assessed satisfactorily in Blacks.

Substantial efforts in hypertension control should continue to improve cardiovascular disease incidence and mortality in Blacks. The heterogeneity of blood pressure levels and hypertension prevalence in Black populations in Africa (20,21,22) the Caribbean (23-27), and the Americas (28) casts doubt on the proposition that genetic factors are primarily responsible for blood pressure excess in U.S. Blacks.

Social, Cultural, and Economic Aspects

There are persistent differences between Black and White Americans in education, occupational level, and income (29-33). On average, Blacks have fewer years of formal education than Whites. Those with equivalent education have access to fewer job opportunities than Whites (34,35). Those with equivalent employment are likely to be paid less than Whites. There is some evidence of a low incidence of coronary disease in Blacks of high socioeconomic status (SES) (36). Improved risk factor distributions have been associated with higher SES, which may account for this observation. Complicating the picture, however, is the impression that higher SES may be associated with lower levels of HDL-cholesterol.

There is an inverse association of education with hypertension prevalence (37). Studies of Blacks indicate that there is an inverse association of blood pressure and/or incidence of elevated blood pressure with both income and social class (38,39). The mechanism by which socioeconomic status is associated with high blood pressure in

Blacks is unclear. High blood pressure has been related to residence in areas of high social stress and instability as well as to coping styles, education, and occupational insecurity. Hypertension-associated mortality rates also show linkages with social instability. The relationship between social factors and high blood pressure (and associated mortality rates) suggests that hypertension control in Black communities can be improved by interventions that are not strictly biomedical, but which increase levels of social support.

Behavioral risk factors, such as diet, smoking patterns, and physical activity are often part of the particular cultural patterns that are grounded in socioeconomic circumstances associated with increased risk. In addition, certain cultural patterns may impede efforts to reduce risk. In particular, cultural factors may determine the effectiveness of efforts to prevent hypertension, to lower CHD risk by reducing risk factors, and to treat hypertension more effectively.

Knowledge and Awareness of Cardiovascular Diseases

Data on knowledge of CVD in Blacks are inadequate but suggest significant deficits in Blacks' knowledge concerning the association of CVD with diet (40). Data on Blacks' health practices important for CVD outcomes are scanty. A few demonstration and education research efforts are seeking to apply insights obtained from studies of CVD to Black population groups.

The impact of education, especially of reading achievement, has been emphasized in some studies of cardiovascular health education. For example, one school-based, cardiovascular health education study in Chicago (41) detected racial differences in the increases in knowledge concerning nutrition, exercise, and smoking and their relationship to CVD after an intervention. Black children had a smaller increase in knowledge than others and, at follow-up nine months later, had persistently lower knowledge scores even after adjustment for reading achievement. Reading achievement also was significantly related to nutrition knowledge and attitudes, but not to behavior.

Awareness of high blood pressure has increased in Blacks in the last decade (9), but many Blacks have significant misconceptions concerning factors that predispose to hypertension (42).

Nonadherence to antihypertensive therapy is a major problem in achieving blood pressure control, but is not specific to Blacks. Determinants of nonadherence by hypertensive Black patients have been identified in several studies (43,44,45), and the effectiveness of a number of health-education strategies in enhancing adherence has been illustrated in studies of Black patients.

Access to Care

Access to care is especially relevant for chronic cardiovascular diseases. Black Americans make fewer office visits to physicians than do Whites, and are less likely to be seen by CVD specialists (46) This may contribute to the less frequent diagnosis of coronary disease in Blacks. Blacks undergo coronary arteriography less frequently than Whites (47). Even when Blacks and Whites have coronary disease of comparable severity, Blacks are less likely to undergo coronary bypass surgery (48). Black patients are less likely than White patients to be seen in physicians' offices and are more likely to be seen in hospital clinics or emergency rooms (49). For hypertensive Black patients, this probably has adverse effects on the continuity of care received.

Blacks have more difficulty in entering the medical care system than Whites and express greater dissatisfaction with services; Blacks perceive the medical care system to be less accessible to them (50). These perceptions can be changed and medical care use increased in a number of settings by targeted interventions. Such interventions must be persistent if good results are to be obtained and preserved.

Hispanics

Coronary Heart Disease and Stroke

CVD is a major cause of death in Hispanics, although the rate is lower than in non-Hispanic Whites (2). This lower relative rate is unexpected given their socioeconomic profile, pronounced rural-to-urban migration and high percentage of immigrants, and the prevalence of obesity and diabetes, particularly in women.

National epidemiological data on cardiovascular disease mortality in Hispanics are limited, to date. Regional CHD mortality rates for Mexican Americans in Los Angeles County (2) and Texas (51) are lower than in Whites for both sexes. The rate of decline in CHD mortality in Hispanics appears to have been comparable to that in Whites during the last decade. Compared with Whites, some preliminary regional data suggest lower stroke mortality rates in Mexican Americans (2), but slightly higher rates among younger Puerto Ricans in New York (52).

Hypertension

There appears to be a strong inverse relationship between SES level and hypertension in Hispanics, similar to that found for Blacks and non-Hispanic Whites. Among Hispanic women this effect remains even when adjustments are made to account for the higher rate of obesity among those with lower SES (56).

Other Cardiovascular Risk Factors

Diabetes mellitus is a major problem in Hispanics, especially in Mexican Americans and Puerto Ricans living in the United States (57,58). However, the relationship between this risk factor and coronary heart disease has not been adequately studied in each of the major Hispanic groups.

The generally higher prevalence of obesity, noninsulin-dependent diabetes, hypertension, high LDL-cholesterol and low HDL-cholesterol levels in Hispanics might be expected to increase their CVD risk. Evidence reviewed on the possible biological or physiological differences between Hispanics and Whites, however, suggests that no specific factor or set of factors explains why Hispanics as a group appear to be at lower risk for coronary heart disease, and at equal or slightly higher risk for cerebrovascular disease than Whites. The existing data indicate that, though more Hispanics smoke cigarettes, fewer are heavy smokers (53,54). There are some indications, however, that there is heavier smoking among Hispanic youth compared to White and Black youth.

The evidence on prevalence of smoking, knowledge about the risks of smoking, and the frequency of practice of leisure-time exercise suggests potentially different risks for Mexican Americans compared to non-Hispanic Whites. Those Mexican Americans with lowest SES and level of acculturation have significantly worse CVD risk factor profiles than those in higher SES groups (53,54). Mexican American women appear to improve their risk factor profile more as a result of increased acculturation and social mobility than do men. The limited amount of comparable data on other Hispanic groups precludes any generalization to these other groups. The relative paucity of data on Puerto Ricans, Cubans, and other Hispanics precludes any conclusions about whether health behaviors could account for any differences in cardiovascular disease risk between these groups and non-Hispanic Whites.

Asian/Pacific Islanders

Cardiovascular Disease

Heart disease is the leading cause of death for all Asian/Pacific Islander American groups (59). However, Asians appear to be at lower risk of mortality from most cardiovascular diseases than other minorities and Whites, with the possible exception of stroke. Asian women appear to be at lower risk than men across all groups. Koreans, Filipinos, and Chinese appear to be at lower CVD risk than Japanese. The overall higher SES of Asians as a group may partially account for their more favorable cardiovascular status.

Stroke

National data suggest stroke mortality rates in Asians are generally similar to those in Whites as shown in Figure 9 (60), with stroke as the third leading cause of death. Recent age-adjusted data for Asian subgroups indicate that Japanese men stand out from most other ethnic/gender groups, including Whites, in having very high stroke mortality rates (59).

Hypertension and Smoking

Though hypertension may not be as significant a public health problem among Japanese and Chinese as among Whites, Blacks, and Hispanics, it is a significant problem among Filipinos (61). Although the proportion of Filipinos receiving treatment for their hypertension is comparable to or greater than that of their White cohorts, fewer have achieved blood pressure control. Fewer Filipino women than men had their blood pressure under control - the reverse of the gender trends for all of the other ethnic groups studied. Filipinos, like their fellow Asians (at least those in California), do not show evidence of an excess prevalence of smoking compared to Whites (62).

Other Cardiovascular Risk Factors

Existing morbidity data suggest that the standard risk factors for CHD are significantly less prevalent among Japanese on the mainland, in Japan, and in Hawaii than in White men in the U.S. Patterns of associations similar to those in Whites are found between the major risk factors and fatal and nonfatal CHD, nonfatal MI, and acute coronary insufficiency (63,64). For the Japanese, as for Whites, high blood pressure, cigarette smoking, and cholesterol are important risk factors for CVD. Overall, Japanese men typically have lower total cholesterol levels than White men. The limited data available on cardiovascular disease risk factors among Chinese Americans indicate that they tend to have lower levels of the major CHD risk factors (65). However, Chinese men over 50 years of age may have a greater prevalence of smokers (who smoke fewer cigarettes per day) and of elevated blood pressure than White men.

The available data suggest that cardiovascular diseases are less prevalent among Asian groups and that perhaps part of this favorable mortality differential can be attributed to a more generally salutary risk factor profile. However, there is enough of a difference in CHD mortality and/or risk status among the various Asian groups and the data are so limited that this generally favorable picture cannot be assumed to hold true for all groups.

Native Americans

Coronary Heart Disease

Heart disease is a significant contributor to all-cause mortality in Native Americans but is proportionately less of a contributor than in the general population. If death rates from noncardiovascular causes such as automobile accidents and alcoholism can be reduced in the future, it is possible that heart disease may increase in Native Americans. Currently, under age 35 years, heart disease mortality for Native Americans is approximately twice as high as for all other Americans.

Cardiovascular Risk Factors

Hypertension appears to be an important health problem for Native Americans, although apparently less so than for the White population (3). Serum cholesterol levels in some American Indian tribes are lower than those in the general population, but the relationship of these lower levels to the incidence of CVD is not clear. It appears that both obesity and diabetes are major public health concerns in Native Americans. The Pima Indians have the highest prevalence of type II diabetes in the United States (66). Although sufficient data are not available to draw firm conclusions about trends in cigarette and alcohol use, or their contribution to CHD, cigarette smoking appears to be less consistently prevalent in Native Americans in different geographic locations, though alcohol abuse is more consistently prevalent (67). Both cigarette and alcohol use constitute a significant health hazard for Native Americans, more so for men than for women.

Social, Cultural, and Economic Aspects

Little reseach has been conducted on the contribution of socioeconomic factors such as low income, high unemployment, and low education to cardiovascular disease mortality, morbidity, and risk status in Native Americans.

Although some socioeconomic factors may contribute to an unfavorable risk profile, other sociocultural factors may operate to confer some protection against coronary heart disease. Many Native American tribes maintain low cholesterol diets, engage in strenuous physical activity as part of their daily lives, and have less time-pressure and have lifestyles that display limited interpersonal competition (52). Recent increases in urbanization, in smoking, in the fat content of diets, and in other behavioral risk factors associated with increased westernization in Native American youth in several tribes suggest the possible beginning of increased coronary heart disease risk in the population.

OPPORTUNITIES FOR PROGRESS

Interventions proposed by the Subcommittee follow:

Risk Reduction Interventions to Promote Cardiovascular Health

There is evidence to justify health promotion interventions directed toward minority groups that would promote dietary patterns that would lower or maintain low blood cholesterol, would reduce or eliminate cigarette use, would encourage an active lifestyle, and would moderate and maintain normal body weight and blood pressure. Effective behavior modification strategies for the treatment of CVD and these CVD risk factors need to be developed and validated in minority populations. Successful techniques should be taught to both the deliverers and the receivers of health care. For example, studies are needed of

- The determinants of cigarette smoking and alcohol use, cessation, and cessation maintenance in all minorities.
- The relationship of obesity, especially in Black females during and after adolescence, to lipoproteins and other factors.
- Socioeconomic status as a risk factor for CHD, hypertension, stroke, and hypertension-related end-stage renal disease in all minority groups.
- The factors responsible for confering some degree of protection with regard to CHD mortality in Asian/Pacific Islanders, despite a relatively high-risk profile.
- The impact of diabetes and obesity in Native Americans and Hispanics.

Effective Cardiovascular Health Education

Effective strategies for cardiovascular health education among specific minority groups should be developed. Procedures should be indentified to facilitate the adoption of specific interventions for cardiovascular risk factors such as high blood cholesterol levels and cigarette smoking in the general minority populations as well as in high-risk subgroups. The model of the National High Blood Pressure Education Program could be adopted and modified for other risk factors for a variety of communities. Care must be taken to consider the different cultural values and attitudes towards CHD and certain risk factors for CHD, such as obesity, chest pain, and particular health-seeking behaviors. The publication and updating of a list of DHHS health promotion and disease prevention materials, including patient education materials, especially directed toward specific minority groups, would be of value to practicing physicians and other health care providers.

Hypertension Prevention and Control

Continued efforts at education, prevention, treatment and control of the hypertension-related diseases, for example, stroke and end-stage renal disease, especially in Blacks, are needed. In addition:

- The long-term efficacy and safety of antihypertensive medications prescribed to minorities (particularly to Blacks) need to be examined. Do the metabolic, hemodynamic, and side effects of treatments and their impact on CHD differ among minorities and Whites?

- Compliance/noncompliance to antihypertensive medication regimens needs to be studied. Why do Filipino women have poorer blood pressure control than Filipino men? This is in contrast to other ethnic minority groups in the United States in which women generally have better blood pressure control than men.

- Investigation of the links between dietary potassium, sodium, calcium and, possibly, other dietary elements and hypertension in Blacks and other minorities is needed.

Delivery of Medical Care

In addition to genetic, environmental, and behavioral factors, appropriate medical care is a major determinant of morbidity and mortality due to cardiovascular disease. Under optimal medical care conditions, for example, a patient with essential hypertension can achieve blood pressure control and reduce the risk of cardiovascular sequelae. However, with variations in physician behavior and patient care-seeking behavior, optimal medical care circumstances are difficult to achieve for large population groups, and are equally if not more difficult to achieve for most minority populations. Simultaneous attention to all the elements of interaction in the medical care setting, including both patient and physician behavior, is necessary. Such research is needed to understand the dynamics of medical care available to Blacks, Hispanics, Asian/Pacific Islanders, and Native Americans because appropriate diagnosis, treatment, and follow-up predispose for a favorable outcome. For example, studies are needed of beliefs, awareness status, and prehospital behavior which might delay appropriate diagnosis and treatment for individuals with symptoms of coronary heart disease in minority communities. Investigation is needed on how specific patterns of risk factors in minorities influence treatment decisions. Techniques are needed that will encourage earlier diagnosis, full use of all diagnostic procedures, and earlier treatment interventions so that minorities enter the delivery system well before an advanced disease state has developed.

Minority Population Studies of Cardiovascular Diseases

Population-based, prospective, observational studies of coronary heart disease (similar to the Framingham study) are needed for the minority populations. A key component of this research would be the validation in minorities of the major established and/or suspected biological and psychosocial risk factors for CVD that have been identified for the White American population. For example, among the many Hispanic subgroups, Puerto Ricans residing in the United States and Cubans particularly warrant such research. Another key element of such research would be the surveillance of the offspring of indexed cases so as to provide crucial information on trends for risk and for disease as well as elucidating familial contribution to CVD incidence and process. Further studies on potential differences in sudden death rates between Blacks and Whites, by age and gender, are needed. There is a need to monitor CVD events that occur in the community, such as sudden death; hospital admissions and discharges of patients diagnosed to have CVD; and emergency room visits for chest pains and related complaints.

Direct Federal Government Activities

DHHS should serve as a catalyst to bring together, on a continuing basis, concerned groups to focus on specific issues, such as: cholesterol, cigarette smoking, and worksite health. These groups should give specific attention to minority issues. The National High Blood Pressure Education Program could serve as a model for this activity.

Meetings should be initiated between DHHS program units and program representatives from other Federal departments to address health problems of mutual interest relating to cardiovascular disease and its prevention. Specifically, information exchange and coordination of smoking cessation and health promotion programs should be strengthened. The Departments of Defense and Education, for example, could join with the several DHHS programs in these areas in seeking to accomplish this.

Employees of the Federal Government should be urged to explore health care plans that offer preventive health services.

More Minority Professionals for Health Care and Research

Development of innovative mechanisms to attract minorities into the health care field and into health research needs to be undertaken with direct and continuing input from leaders in the minority health professions.

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SUBCOMMITTEE ON CHEMICAL DEPENDENCY

EXECUTIVE SUMMARY

Introduction

This report reviews the role that chemical dependency plays in contributing to the health disparity between Blacks, Hispanics, Asian/Pacific Islanders, and Native Americans and the nonminority population. Using excess mortality rates in minority populations due to cirrhosis, cancer, and unintentional injuries as a basis, the Subcommittee chose to include alcohol abuse, illicit drug abuse, and cigarette smoking as elements of chemical dependency. The Subcommittee did not include the abuse or misuse of licit drugs. Although these substances may contribute to the health disparity, few data are available on which to base an analysis.

The 1979 Surgeon General's report, Healthy People, indicates that alcohol misuse is a factor in more than 10 percent of all deaths and may be higher among minorities (1). Tobacco use is a factor in more than 16 percent of all deaths; nearly 90 percent of all lung cancers are caused by cigarette smoking (2). No similar statistics are available for illicit drug abuse.

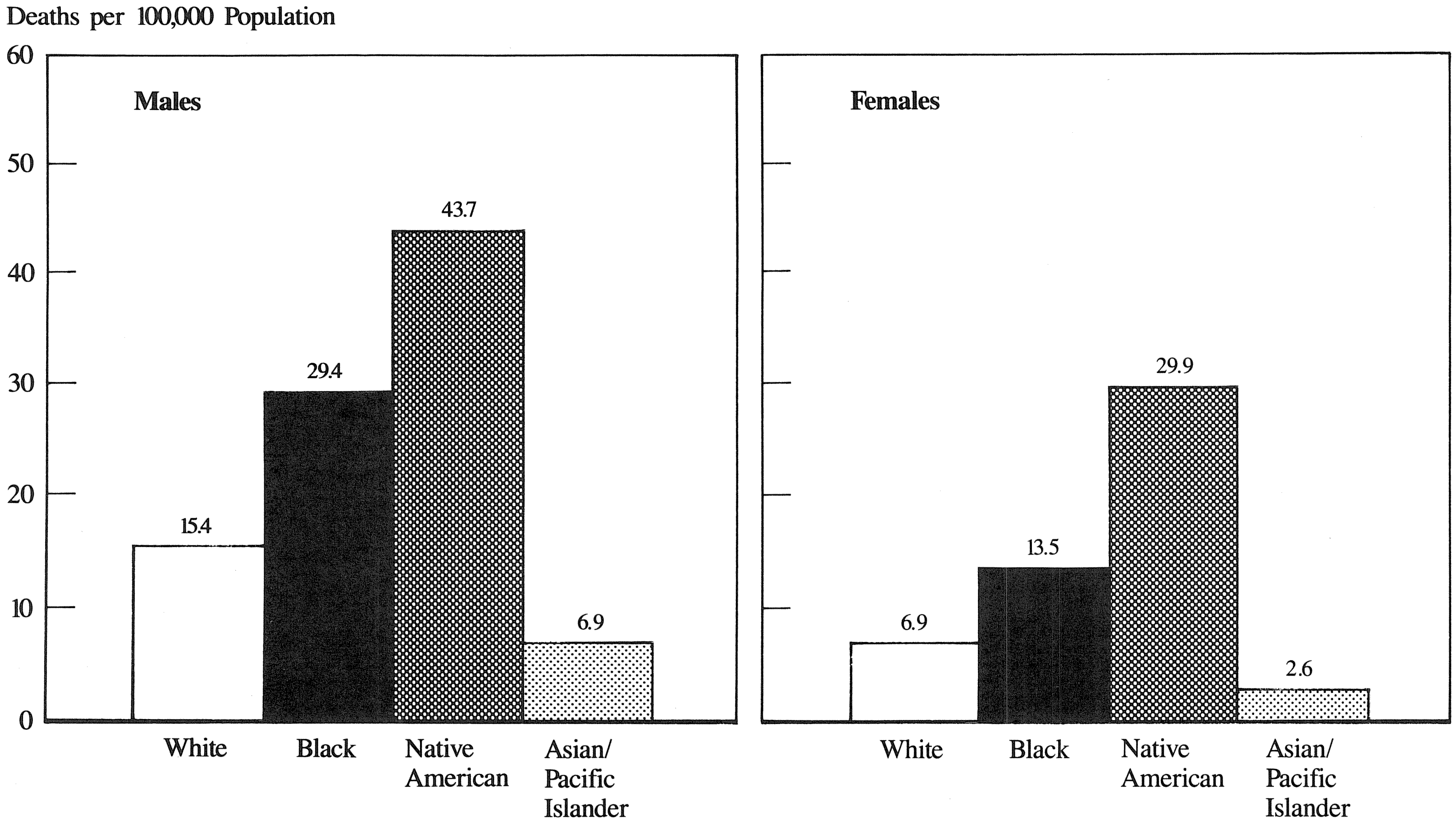
Because data on the prevalence of chemical dependency for the minority population are limited, it is difficult to know the extent of the problem among minorities and the resultant impact on health status. Excess deaths among minorities due to cirrhosis, heart disease, unintentional injuries, homicide, and cancers of the mouth, larynx, tongue, esophagus, and lung provide insight into the problems of chemical dependency. Figure 10 illustrates the average annual death rates by race for chronic liver disease and cirrhosis, one of the indicators of the problem of alcohol abuse.

Alcohol

Alcoholism and alcohol-related problems are complex and involve a wide range of medical, social, and legal problems that impact on different populations at risk in different ways. All persons of a particular group are not at equal risk for alcohol-related adverse health outcomes. However, an inadequate body of research exists on the impact of alcohol and alcohol-related problems on minority health status. The majority of national studies, to date, were designed to elicit baseline data on the general population. As a result, minority samples from these surveys generally are too small to draw definitive statements and conclusions about alcohol use and the nature and extent of alcohol-related problems among minorities.

Figure 10

Average Annual Age-Adjusted Death Rates for Chronic Liver Disease and Cirrhosis, 1979-1981



NOTE: Death rates for Hispanics are not available. Death rates for Native Americans and Asian/Pacific Islanders are probably underestimated due to less frequent reporting of these races on death certificates as compared with the Census.

SOURCE: National Center for Health Statistics, Bureau of the Census, and Task Force on Black and Minority Health.

Blacks

Few studies exist on the subject of alcohol and Blacks; however, there is evidence that alcohol abuse has a major impact on the health of Blacks. Using cirrhosis deaths as an indicator of high alcohol use, cirrhosis mortality rates have declined consistently among all race-sex groups in the United States since 1973, but they are still disproportionately high among Black Americans (3). Overall, the cirrhosis mortality rate for Blacks is nearly twice that of nonminorities (4). In addition, Blacks suffer disproportionately from the health consequenes of alcoholism, including esophageal cancer.

A national survey conducted in the 1960s indicated that Black and White men differed little in their drinking patterns, but that Black women had a higher proportion of abstainers and of heavier drinkers than Whites (51 percent versus 39 percent and 11 percent versus 7 percent, respectively) (5). The quantity and frequency of alcohol consumption for Black and White males are comparable when social class is controlled (6). A 1979 national survey of American drinking practices found that both Black males and females were more likely to classify themselves as abstainers than Whites (30 percent versus 25 percent for males and 49 percent versus 39 percent for females, respectively) (7). Overall, Black drinking patterns are similar to those reported in the general population, with rates varying greatly along geographic, sex, and religious dimensions.

Blacks appear to be at disproportionately high risk for certain alcohol-related health problems. National Cancer Institute data indicate that between 1979-1981, the incidence rate of esophageal cancer for Black males, aged 35-44 years, was ten times that of Whites. Alcohol consumption is believed to be a primary etiologic agent in the development of this cancer. Fetal alcohol syndrome (FAS) is a health consequence associated with heavy alcohol use in pregnant women (8). Current data on FAS are inconclusive for Black women, and further investigation is required to define the relationship between alcohol, the prevalence of FAS, and related effects.

Data from national surveys show that Black youths, ages 14-17, drink less than White youths, have consistently higher abstention rates, and have consistently lower heavy drinking rates and similarly lower alcohol-related social consequences than their White counterparts (9). Black males begin to report high rates of heavy drinking and social problems due to drinking after the age of 30, compared with White males where heavy and problem drinking is concentrated in the age group of 18 to 25 years.

Hispanics

Studies of Hispanic drinking practices and consequences are less available and not as informative as those for Blacks. Mortality statistics for the United States do not identify Hispanics separately, and, until 1976, most other common measures of alcohol-related problems such as arrest and hospital discharge rates did not provide a Hispanic identifier. Although some information is available from regional surveys, these data are limited to specific subpopulations such as Mexican Americans. Nonetheless, there is some indication that Hispanics, particularly young males, suffer disproportionate health consequences as a result of their use of alcohol.

Deaths from cirrhosis of the liver are a general indicator of high alcohol use within a given population. Several studies suggest that death rates from cirrhosis among Mexican Americans and Puerto Ricans may be higher than among the general population. While there is some indication that Hispanics are overrepresented in the mortality statistics for alcohol-related causes, these data stem mainly from studies in a few cities or counties in the Southwest. Little is known about the health consequences of alcohol use among Hispanics in the rest of the United States.

The 1979 National Institute on Alcohol Abuse and Alcoholism National Survey indicates that based on self-reported data, Hispanic American males ages 18 and older have higher levels of heavy drinking and higher rates of alcohol-related problems than do nonminorities (10). Hispanic females, however, reported being either abstainers or light drinkers. The most recent study on drinking patterns suggests that young Hispanic males, ages 18 to 29 years, tend to drink more heavily than either Black or White youths and young adults (34 percent, 17 percent, and 29 percent, respectively) (11).

Native Americans

The Indian Health Service reports that five of the top ten causes of death among Indians are directly related to alcohol: accidents (21 percent), cirrhosis of the liver (6 percent), alcoholism (3.2 percent), suicide (2.9 percent), and homicide (2 percent). National mortality statistics indicate that these five causes account for 35 percent of all deaths among Native Americans (12). A recent report based on age-adjusted mortality rates found that the mortality rate from alcohol-related causes of death was more than three times higher among Native Americans than that of other groups. Among Alaska Natives, alcoholism and alcohol-related problems are a major health problem. Alaska Natives, who comprise 17 percent of Alaska's population, account for 60 percent of the alcoholism deaths in that State (13).

Unintentional injuries account for an estimated 21 percent of all deaths in the Native American population and are the leading cause of mortality. The Indian Health Service estimates that 75 percent of all accidental deaths among Indians are alcohol-related (12).

The fourth-ranked cause of death among Native Americans, cirrhosis of the liver, accounts for nearly 6 percent of total deaths, compared with 1.7 percent of the total deaths for the Nation.

According to one study, cirrhosis mortality rates for Native Americans are higher than rates for Black or White adults, and the highest rates for Native Americans occur at younger ages. Examination of the sex-specific data reveals that Native American women have much higher cirrhosis mortality rates than either Black or White women at all age levels (12).

The diagnosis of alcoholism accounts for an estimated 3.2 percent of all Native American deaths, which is approximately four times the rate for the Nation. Researchers suggest that this diagnosis might be ranked even higher if all deaths from alcoholism were accurately reported.

Suicide accounts for 2.9 percent of all deaths within the Native American population, or twice the national percentage. It is estimated that 80 percent of all deaths by suicide within the Native American community are alcohol-related (12).

The tenth-ranked cause of death in Native American communities is homicide, which accounts for an estimated two percent of total deaths. The Indian Health Service reports that 90 percent of homicides committed within Native American communities occur while either the perpetrator, the victim, or both are under the influence of alcohol (12).

Another medical consequence of alcohol abuse for which some Native Americans appear to be at higher risk is fetal alcohol syndrome/fetal alcohol effects (FAS/FAE), although the risks appear variable depending upon the tribal group. An epidemiological study of FAS among Native Americans of the Southwest concluded that the incidence and patterns of recurrence of FAS among the three groups studied (Plains Indians, Navajo, and Pueblo) showed consistent differences, ranging from a high of 10.3 per 1,000 live births for Plains Indians, to 1.3 per 1,000 live births in the Navajo population (14).

Alcohol use varies tremendously from one tribe to the next--some tribes have proportionately fewer drinking adults than the U.S. population as a whole (30 percent compared to 67 percent) whereas other tribes have more drinkers (69 to 80 percent)--with the prevalence of alcohol-related problems also being highly variable (15). The ability to define subpopulations at risk is important in terms of preventive measures. Clearly, the health consequences of alcohol use and abuse for Native Americans are a major public health concern that must be addressed.

Asian/Pacific Islanders

The impression that Asian/Pacific Islanders do not consume as much alcohol as the general population is generally supported by research studies. However, because of the wide variations in drinking among the different Asian nationalities, it is difficult to arrive at generalizations without specifying country of origin and understanding some of the historical-cultural factors that contribute to the differences among Asian subpopulations with regard to the use of alcohol.

There is evidence of wide variation among Asian/Pacific Islander groups in terms of problem behavior related to alcohol consumption, although very little research exists in this area (16). Native Hawaiians, however, appear to be at increased risk for excess mortality from alcohol-related motor vehicle accidents (17).

Research on the so-called "flushing reaction" shows that approximately 50 percent of persons of Asian background metabolize alcohol much more quickly than do Caucasians, causing a "flushing reflex" and a high degree of discomfort, which may provide some protection against heavy drinking and related problems. However, the relationship between this sensitivity and the use of alcohol needs further exploration.

Drug Abuse

National surveys of drug and alcohol abuse have been designed to focus on the general household population. Consequently, there are no national data on race- or ethnic-specific rates for drug abuse or the health consequences of drug abuse. Estimates of the prevalence must be viewed conservatively, since certain potentially high-risk subgroups such as persons with no fixed residence or institutionalized populations (e.g., college students living in dormitories) are not included in the sample. Data on admissions to treatment centers, emergency room visits, and medical examiner cases among minorities provide some data on the consequences among minority populations.

Another problem in obtaining data on minorities is that Blacks, Hispanics, Native Americans, and Asian/Pacific Islanders are sampled proportionately to their numbers in the general population. The actual sample size for minorities is substantially smaller than that for Whites (1,093 Blacks sampled in the 1982 National Household Survey on Drug Abuse (NHSDA) and 4,520 Whites). Blacks and Hispanics are being oversampled in the 1985 NHSDA in an effort to provide more reliable estimates of drug abuse prevalence in minority populations.

Despite these data limitations, the studies that have been done suggest that drug abuse-related morbidity and mortality in Blacks, Hispanics, and Native Americans are greater than for the White population. Data on the Asian population do not indicate similar excess mortality.

Data from the 1982 NHSDA indicate that the prevalence of reported drug use within the household population is generally higher in urban areas than in suburban or rural areas (18). Thus, to the extent that minorities are more likely to reside in inner-city areas, they may be at greater risk of drug abuse and, ultimately, the negative social and health consequences associated with drug abuse.

The overall prevalence of drug abuse in the general household population, ages 12 and older, is about the same for minorities as it is for Whites (18). Minorities were more likely than Whites to report marijuana as their only form of illicit drug use. Among both minorities and Whites, the highest levels of current drug use were reported by young adult males, ages 18 to 25 years. Among young adult White men, 21 percent reported current use of marijuana only (19). Thirty-six percent of young adult minority men reported current use of marijuana only.

Another important aspect of marijuana use among minorities is that unlike the pattern for young adult Whites, a decreasing trend in use has not been observed among minority young adults, ages 18 to 25 years. The decreasing trend of marijuana use among White youths, ages 12 to 17 years, however, does appear to be paralleled by a decreasing trend among minority youths in that same age group (19).

The health consequences of drug abuse may be greater for minorities than for nonminorities as a result of the route used to administer the drugs. To the extent that minorities are more involved in the intravenous use of drugs, they are at increased risk of potentially fatal infections from hepatitis B virus, bacterial endocarditis, and acquired immune-deficiency syndrome (AIDS) (20-22).

A few follow-up studies of narcotic addicts hospitalized and treated for their drug problems suggested that they experienced greater-than-expected rates of accidents, suicides, homicides, and deaths due to overdose (23). Data specific to minorities are not yet available to determine if traffic accidents are associated with illicit drug use (24). Additional studies of the health consequences of drug abuse that report data with racial and ethnicity identifiers are discussed in the minority-specific sections of this report.

Blacks

Data from the 1980 census indicate that Blacks constitute 11.5 percent of our population; however, they constitute 22.5 percent of the population of the inner cities (25). As such, they may be at greater risk of drug abuse and its consequences. Evidence of higher rates of drug use in populations having no fixed residence is provided by a 1983 study of drug use among tenants of single-room occupancy hotels (SRO) in New York City. Results suggest that Blacks have higher rates of drug use than Whites for marijuana, cocaine, heroin, and illicit methadone. Further analysis of a sample of Blacks matched for age and sex from the household population and the SRO population indicated that SRO tenants were three times as likely to have used drugs recently as were the New York City household residents (26).

Data obtained from the 1982 National Drug and Alcoholism Treatment Utilization Survey (NDATUS), a national survey of public and private treatment units, suggest that Blacks are three times more likely to be in treatment for a drug abuse-related problem than are Whites (27).

Data from the Drug Abuse Warning Network (DAWN)--gathered from treatment programs, emergency rooms, and medical examiner cases--indicate that minorities are more likely than nonminorities to be involved with more dangerous drugs and with more dangerous combinations of drugs. (Generalizations to the total population cannot be made from the DAWN data, which are based on 27 metropolitan areas and a panel of emergency rooms outside these metropolitan areas.) For example, 31 percent of Black treatment clients reported a primary problem with heroin, cocaine, or PCP, a figure three times that reported by White clients. They were also more likely to report use of other substances, with inhalants being the drug most commonly included (19). Heroin use is difficult to measure in the household survey because it is a relatively rare event; it is more likely to involve the nonsampled population, and it is more likely to be underrreported.

Recent medical examiner data reported to DAWN show increases in positive toxicology for cocaine with or without other drugs for all races over the past three years. Between 1982 and 1984, cocaine-related deaths among Blacks tripled (51 to 177), while they doubled among Whites (149 to 312) (28). Heroin trends have been relatively stable over the same time period. The percentage of PCP-related deaths alone or in combination with other drugs increased in Blacks from 50 percent in 1983 to 58 percent in 1984 (personal communication, National Institute on Drug Abuse, 1985).

DAWN data for 1984, taken from emergency room episodes only, showed that, of 96,047 cases, Blacks were somewhat more likely than were Whites to have used more dangerous routes of cocaine administration--by injection (used by 49 percent of Blacks versus 40 percent of Whites) and by smoking or freebasing (9 percent of Blacks versus 3 percent of Whites). Because these data are not based on statistical sampling procedures, generalizations to the total population cannot be made (19).

Some data are available to suggest a relationship between drug abuse and homicide. A study conducted by the New York City Police Department in 1981 and 1982 found that 53.1 percent and 46.4 percent, respectively, of drug-related homicides involved Black victims (29).

Hispanics

Data from the 1980 census indicate that Hispanics constitute 6.4 percent of our population; however, they constitute 10.8 percent of the population of the inner cities (25). As such, they may be at a somewhat greater risk of drug abuse and its consequences. Results from the 1983 SRO study of drug abuse in New York City suggest that Hispanics have higher rates of drug use than non-Hispanic Whites for marijuana, cocaine, heroin, and illicit methadone (26).

Multiple drug use is a problem for all minorities. Data from hospital emergency room cases and from drug abuse treatment programs indicate that Hispanics were more likely than Whites to report a primary problem with heroin, cocaine, or PCP. In addition, inhalants were the most commonly reported category of other drugs used. A dramatic increase in reports of positive toxicology for cocaine was found among the Hispanic population. Between 1982 and 1984, cocaine-related deaths among Hispanics tripled (16 to 49), while they doubled among Whites--from 149 to 312 (19).

Recently, it has been suggested that prevalence of inhalant use by Hispanic youths is high. Although this cannot be supported by household and high-school population surveys, a 1979 study of Mexican American children and adolescents in Los Angeles barrios found prevalence of inhalants 14 times that of the general population (30).

The 1982 NDATUS suggested that Hispanics are 2.7 times more likely to be in treatment for a drug abuse-related problem than are Whites (27).

The 1984 DAWN data indicate that of those treated for drug-related emergency room episodes, 42 percent of Hispanics as compared with 40 percent of Whites administer cocaine by injection; 6 percent of Hispanics as compared with 3 percent of Whites administer cocaine by smoking or freebasing. Both are more dangerous routes of administration than the intranasal route and lead to more frequent use of the drug (19). Recently, intravenous use of a "designer" drug, meperidine-analog-synthesis (MPTP), has been associated with early onset of chronic Parkinsons disease symptoms in drug addicts (31). While cases are still being identified, a large proportion of the initial cases were Hispanic (personal communication, Paul Jarbe).

A 1981-82 New York City Police Department study of drug-related homicides found that 34.2 percent involved Hispanic victims. In 1982, the percentage of Hispanic victims increased to 41.8 (29). Reports based on the New York City medical examiner cases from 1967 to 1970 indicate an overrepresentation of Hispanics among narcotic addiction deaths. An investigation of 927 deaths among New York City narcotic addicts in 1971 found that 16 percent were Puerto Rican.

Native Americans

Data obtained from the 1982 NDATUS suggest that Native Americans are twice as likely to be in treatment for a drug abuse-related problem than are Whites (27).

Treatment data were collected nationally in 1983 on a voluntary basis through the Client Oriented Data Acquisition Process (CODAP), (based on 23 states, Washington, D.C., and territories; California represented 46 percent of treatment admissions). The proportion of 1983 CODAP client admissions, excluding alcohol, was 0.6 percent for American Indians/Alaska Natives. Although the representation of Native Americans in the CODAP service area is unknown, this rate of admissions is one and a half times the representation of Native Americans in the U.S. population. CODAP also indicated that American Indian clients were more likely than White clients to report a primary problem with heroin, marijuana, or PCP. Native Americans also were more likely to report the use of "other" drugs than White clients. The most common type of the "other" drugs category reported was inhalants (19).

Few studies and surveys of drug abuse have focused on minority subgroups of the population, however, one survey of Native American youth, (7th through 12th grade in Indian reservation schools) has been conducted annually since 1975. Results from this survey for 1980-81, on the lifetime prevalence of substance use for Native American high school seniors, show that for 10 of 12 substance categories, Native Americans have higher lifetime prevalence rates of substance use than high-school seniors nationally. "Ever-use" of marijuana (88 percent) and inhalants (34.4 percent) by Native American seniors, in particular, far exceeds that for national high-school seniors, which is 59.5 percent and 12.3 percent respectively (32). Although lifetime prevalence rates provide an indication of exposure, figures on frequency of use for a given time period provide a better indication of consequences and/or problem use. When frequency of substance use for Native American youth (grades 7-12) is compared with a sample of similarly aged non-Native American urban youth, a striking difference is evident for marijuana. In 1980-81, 13.4 percent of Native American youth reported daily use of marijuana in the 2 months before the survey as compared with 2.6 percent of the non-Native American urban youth (32).

Asian/Pacific Islanders

There is a paucity of data on prevalence of drug abuse among Asian/Pacific Islanders. The little information that is known suggests that the incidence of drug abuse is lower than that of the White population; however, existing data are insufficient to draw any definitive conclusions.

The 1983 treatment data collected through CODAP reported that only 0.8 percent of all the clients admitted were Asian/Pacific Islanders; thus, this group appears to be underrepresented in the treatment population (19). The proportion of the Asian/Pacific Islander population in the United States is 1.6 percent.

A 1971 New York City investigation of 927 deaths among narcotic addicts, during a 9-month period, found only 2 percent of the deaths were Asian/Pacific Islander, although, representatively, a much larger Asian American population resides in that area.

Smoking

Cigarette smoking is the chief preventable cause of death in the United States. Cigarette smoking is a causal factor for coronary heart disease and arteriosclerotic peripheral vascular disease; cancer of the lung, larynx, oral cavity and esophagus; and chronic bronchitis and emphezema. It is also associated with cancer of the urinary tract, bladder, pancreas, and kidney, and with ulcer disease and low birthweight (2).

Differences exist between the smoking behavior of minorities and nonminorities, and the incidence and gravity of cigarette-related diseases varies. The most important of these are differences in the smoking behavior of nonminority and minority males, especially for Blacks and Hispanics (33).

Blacks

The National Health Interview Surveys (NHIS), conducted by the National Center for Health Statistics (NCHS), are the major sources of data on the smoking behavior of the U.S. population. Data from NHIS, for the period between 1965 and 1980, show a steady decline in the prevalence of smoking, a decline evident for both Whites and Blacks. The prevalence of Black male smokers declined from 59.6 percent in 1965 to 44.9 percent in 1980. Among White males, the prevalence of smokers declined from 51.3 percent in 1965 to 37.1 percent in 1980 (34).

Substantial differences exist between cigarette smoking patterns of Blacks and Whites, yet the way in which these differences affect the health outcome of Blacks versus Whites is unclear. Differences have been observed in total smoke exposure as measured by age of initiation, number of cigarettes smoked per day, and tar and nicotine content of cigarettes smoked.

The prevalence of cigarette smoking among Black males has consistently exceeded that of White males; however, only small differences in prevalence exist between White and Black females. Significant differences do exist, however, between Black and White females with respect to number of cigarettes smoked per day. Black females have a higher prevalence of "never-smokers" than do White females at every income level above $5,000. Differences observed between Black and White males are not explained by occupational, educational, or income differences. However, the highest prevalence of White males who have never smoked was in the lowest income level (below $3,000) while the lowest prevalence of never smokers among Black males was in the lowest income level.

NHIS data on numbers of cigarettes smoked indicate that Whites are heavier smokers than Blacks. Among White males, 35.9 percent were heavy smokers as compared with 11.9 percent among Black male smokers. Similarly, White female smokers smoked more cigarettes per day than did Black female smokers. For White females, 23.8 percent smoked more than 25 cigarettes a day versus 7.5 percent for Black females (35). In contrast, both Black males and females smoked cigarettes of higher tar content than did either White males or White females. Although the percentage of Blacks who ever started smoking is lower than the percentage of Whites who ever started smoking, once started, Blacks are less likely to attempt to quit or to quit successfully.

The effect these differences in smoking patterns have on mortality and morbidity patterns exhibited by Blacks and Whites is unknown; however, it is clear that nearly 90 percent of all lung cancers are caused by cigarette smoking and that smoking-related cancers seem to be particularly high among Blacks. Blacks have higher incidence rates for the tobacco-related cancers of the lung, esophagus, pancreas, and stomach. (For more discussion, refer to the Summary Report of the Task Force Subcommittee on Cancer.) Smoking appears to increase the risk of cardiovascular disease mortality in both Blacks and Whites. It is not known, however, how differences in smoking patterns between Blacks and Whites affect differences in cardiovascular disease for these groups. (Further information is contained in the Summary Report of the Task Force Subcommittee on Cardiovascular and Cerebrovascular Disease.)

Hispanics

Lung and esophageal cancer morbidity and mortality rates, known to be related to smoking, are lower for Hispanics than for non-Hispanic Whites and Blacks. An exception to this has been reported for New Mexico Hispanic females, among whom the incidence of esophageal cancer is 20 percent higher than non-Hispanic Whites. Studies suggest a link between the development of esophageal cancer and smoking and alcohol consumption, with the latter two having a synergistic effect (36).

It is not adequate only to consider smoking-related cancer data as indicators of future risk for any group; current smoking behavior patterns must also be considered. Overall prevalence rates of smoking among Hispanics are relatively low due to the consistently lower rates of smoking observed among Hispanic females; however, prevalence rates among Hispanic males are quite high. Recent surveys of smoking behavior in California, Texas, and New Mexico indicate that Hispanic males appear to be smoking as frequently as their non-Hispanic White counterparts, although their consumption levels appear to be lower (37). Data from the 1980 NHIS indicate that 40.9 percent of Hispanic males and 22.9 percent of Hispanic females were current smokers as compared with 38.2 and 31.4 percent of Whites, respectively (33).

Examination of data from the "Know Your Body" program showed that male and female Hispanic adolescents exceeded both male and female White and Black adolescents in self-reported current cigarette use. Findings from that survey and others suggest that, as cigarette use increases among Hispanics, incidence rates for tobacco-related cancers may increase in Hispanics, and that prevention efforts aimed at this group are needed in the future.

Native Americans

Limited data are available from which to examine smoking behavior and its health consequences in the Native American population. Overall, Native Americans have smoking-related, lung cancer rates lower than those of Whites; however, the relative frequency of lung cancer differs among tribes. For example, among Oklahoma Indians, where the lung cancer standardized mortality ratio is higher than in other tribes, both cigarette smoking and lung cancer mortality more closely mirror the national average. In contrast, Native Americans of the Southwest, who seldom smoke, have low rates of smoking-related lung cancer (2). Environmental and cultural factors such as urban, rural, and reservation living conditions may play a role in this discrepancy.

Data do exist for Native American high-school seniors and the prevalence of smoking among this population. Based on a study that compared the lifetime prevalence of substance use between 1980-81 for Native American high-school seniors and national high-school seniors, Native American high-school seniors exhibited a prevalence rate for cigarette smoking of 72.3 percent, compared with 71.0 percent for high school seniors in the Nation (19). Although not significantly different from the rate reported nationally, the smoking prevalence of Native American youth needs to be more closely monitored, as one indicator of future risk for smoking-related cancers.

Asian/Pacific Islanders

The prevalence of smoking among Asian/Pacific Islanders is unknown due to the paucity of data. Certain subgroups within the Asian population do exhibit excess incidence and mortality for some smoking-related cancers. For example, Hawaiians have excess mortality for cancer of the lung (refer to the Subcommittee Report on Cancer). Also, the incidence of esophageal cancer is 2.5 times higher for Japanese males than White males; 1.8 times higher for Chinese males than White males; and 1.6 times higher for Chinese females than for White females (2). Major risk factors for esophageal cancer are smoking and alcohol consumption, with the use of both having a synergistic affect. Finally, excess risk for pancreatic cancer has been found among cigarette smokers; pancreatic cancer incidence is about 20 percent higher among Chinese females than among Whites, and an upward trend in incidence exists for Chinese of both sexes.

Although the prevalence rates of smoking for Asian/Pacific Islanders are unknown, it is clear that an increased incidence for certain smoking-related cancers exist among subgroups of the Asian population.

OPPORTUNITIES FOR PROGRESS

Interventions proposed by the Subcommittee follow:

- Promote the initiation and/or expansion of efforts to develop coping skills in children and adolescents, ages 9 to 15 years, to delay or prevent the use of substances such as tobacco, drugs, and alcohol, with special emphasis on the needs of minorities.
- Foster the development of peer-group instruction programs in school settings designed to strengthen resistance to the use of substances such as tobacco, drugs, or alcohol, with special emphasis on the needs of minorities.
- Perform research into cirrhosis, including studying the basic biological mechanisms involved in the development of cirrhosis of the liver in Black, Native American, and Hispanic populations.
- Develop programs to prevent alcohol-related unintentional death and injury among Blacks, Hispanics, Native Americans, and Native Hawaiians. Epidemiological research is needed to define further the subpopulations of each minority group that are at greatest risk so that prevention and education efforts as well as early intervention and treatment programs can be developed and targeted with greater likelihood for success.
- Investigate the biological consequences of alcohol use in terms of its contribution to excess mortality among minority groups. The role of alcohol use in hypertension, the role of alcohol use in the development of some cancers in Blacks, and the extent to which alcohol is a factor in the adverse pregnancy outcomes among all minority groups, especially Black and Native American women, are suggested topics.
- Determine the nature and extent of smoking among Hispanics, Native Americans, and Asian/Pacific Islanders so that the health consequences associated with smoking in these populations might be understood and appropriate prevention strategies developed.

- Study the prevalence, etiology, and consequences of drug abuse among Blacks, Hispanics, Native Americans, and Asian/Pacific Islanders through case-control cohort, or historical cohort epidemiological studies utilizing culturally sensitive instruments.

- Develop improved incidence and prevalence data gathering techniques to assess alcohol and drug abuse among all minority groups.

- Develop mechanisms in concert with appropriate state and local entities to support specialized drug abuse prevention and treatment programs in rural and urban Native American/Alaska Native communities.

- Encourage Blacks to enter smoking cessation programs and maintain cigarette abstinence.

- Review DHHS health professionals' training programs to ensure the inclusion of education about alcohol and drug abuse in the curricula.

- Provide assistance to appropriate organizations for health care professionals to ensure that education on alcohol and drug abuse is included in their training curricula. This includes training in the diagnosis and prevention of alcohol and drug abuse in a variety of patient populations, including ethnic minorities; in referring patients to appropriate treatment settings; and, in the provision of direct service and treatment that is relevant to the specific minority patient.

- Encourage private sector organizations to train minority research scientists and health care providers in substance abuse research, diagnosis, and treatment.

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SUBCOMMITTEE ON DIABETES

EXECUTIVE SUMMARY

Introduction

Diabetes mellitus was the seventh leading cause of death in the United States in 1980 and is one of the six major contributors to the disparity in health status between minorities and nonminorities (1). The significance of diabetes as a health problem is increased by its association as a risk factor for other major diseases, including coronary heart disease and peripheral vascular disease. Complications include kidney failure, diseases of the eye, and vascular complications that may result in amputations.

There are two major types of diabetes, according to currently accepted clinical definitions. Insulin-dependent diabetes mellitus (IDDM), formerly classified as type I diabetes, accounts for 5 to 10 percent of all the cases of diabetes in the United States. IDDM may occur at any age but typically develops in childhood or young adulthood. Specific genetic markers are associated with IDDM. It is slightly more prevalent in the White population. Noninsulin-dependent diabetes mellitus (NIDDM), formerly classified as type II, is the more common form of the disease, accounting for 90 to 95 percent of all cases. Type II diabetes is most often found in middle-aged and older adults, especially women. Data from the National Center for Health Statistics (NCHS) reveal that diabetes is more prevalent among minority groups than in the general population and that the excess of morbidity and mortality among minorities occurs overwhelmingly in type II (NIDDM). Although national statistics often do not distinguish between the two types of diabetes, the dominance of type II is significant because the risk factors for the two types are not identical. This report focuses on the risk factors and treatment issues related to the excess NIDDM in minorities.

A glucose tolerance test is most commonly used to identify diabetes in an individual patient, but this assessment technique has changed over time. Consequently, lack of comparability in the criteria used to define diabetes in clinical studies is problematic when attempting to estimate the extent of diabetes among the minority populations. Relatively few reports and studies of minority prevalence rates have used the widely accepted National Diabetes Data Group (NDDG) criteria for definition of the several types of diabetes. In this report, the term diabetes will be used when the two major types have not been distinguished, and the term NIDDM will be used when data specifically refer to that type as defined by the NDDG. Failure to distinguish between the two types of diabetes does not, however, change the overall prevalence information, since the 90 to 95 percent of diabetic people identified in clinical studies, both minorities and nonminorities, are noninsulin-dependent diabetics.

Comparison of mortality data between the White population and the minority population shows disproportionately higher mortality rates from diabetes among Blacks, Hispanics, Native Americans, and Asian/Pacific Islanders compared with non-Hispanic Whites.

Blacks

The prevalence of diabetes is 33 percent higher in the Black population than in the White population (2). Data from NCHS show that the rate of diabetes is 50 percent greater among Black females than the rate in White females. In all populations, NIDDM is related to obesity. The prevalence of obesity among Black females is striking when compared with the White population as shown in Figure 11 (3). It has been shown that the majority of Blacks who are diabetic are overweight women. Furthermore, according to several studies, complications of diabetes are more frequent among the Black population of diabetics when compared with their White counterparts. The prevalence of macrovascular disease or large-vessel disease causing heart disease and stroke, and microvascular or small vessel disease, which leads to kidney failure and blindness, appear to be more frequent among Blacks with diabetes than in Whites with diabetes.

The National Diabetes Control Program, administered by the Centers for Disease Control (CDC), has provided some data on pregnancy outcome for Blacks with diabetes, in selected geographic areas. One model project in South Carolina revealed that the birth rate per 1,000 women was higher for Blacks with diabetes compared to Whites with diabetes (2). However, the pregnancy outcome among this population showed that the perinatal mortality rate among diabetic Blacks was three times that of diabetic Whites and 8.5 times that of nondiabetic Whites(4). From this and other published reports, it is clear that diabetes during pregnancy is associated with a greater number of infant deaths among Blacks than Whites.

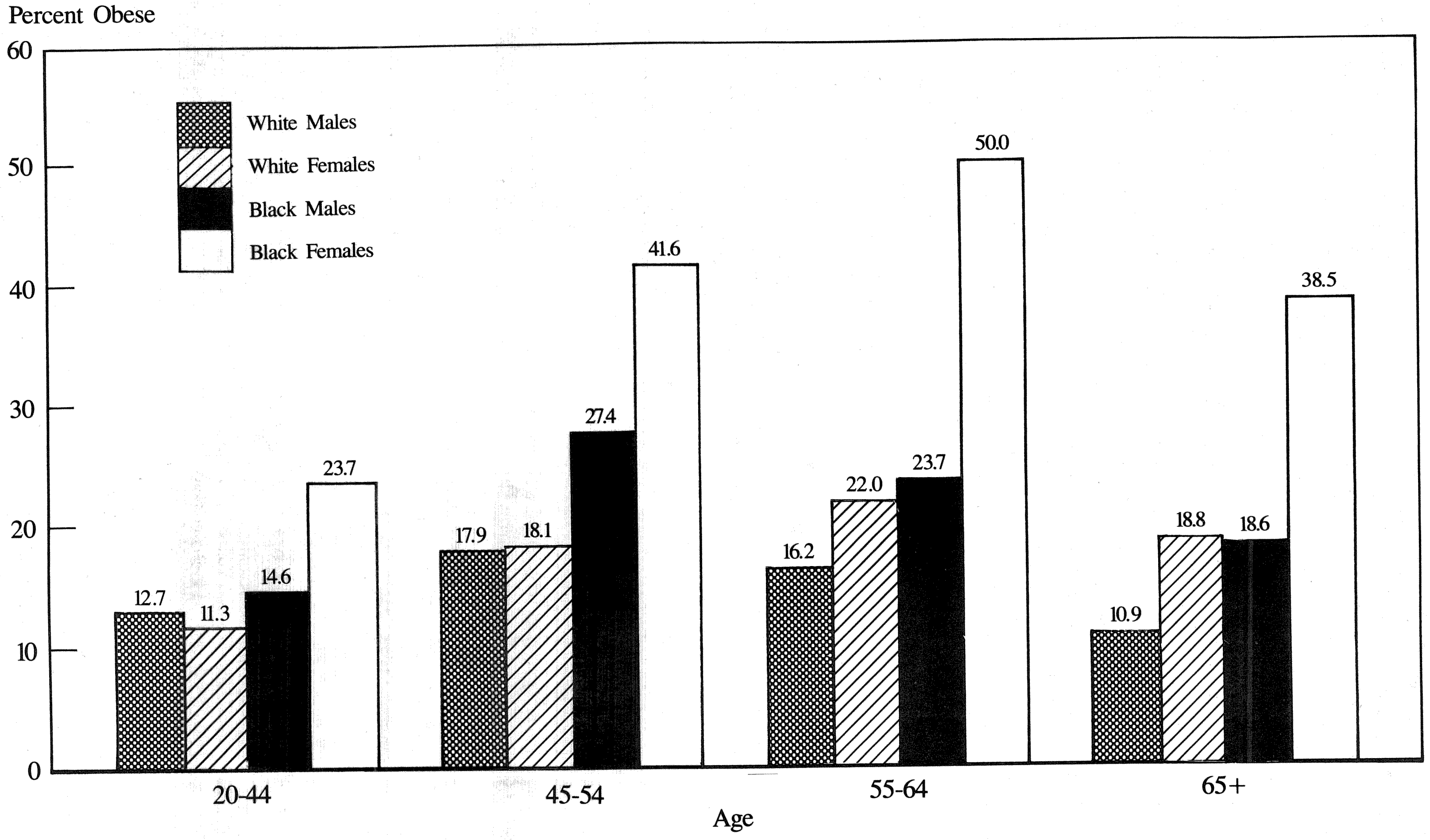
Evidence shows that mortality attributed to diabetes increases with age in both Whites and Blacks. Until recently, the rate peaked at younger ages in Blacks, an effect attributed to the shorter lifespan among Blacks and to the conjectured earlier onset of disease.

Native Americans

Before the 1930s, diabetes mellitus was infrequently diagnosed among Native Americans. However, in the past 20 years, diabetes mellitus has been recognized as highly prevalent among American Indians and Alaska Natives, with diabetes-related mortality rates 2.3 times higher than in the general population. Among the more than 500 federally recognized tribes of American Indians and Alaska Natives, the prevalence rate of diabetes is highest among the Pima Indians, who have the highest rate of diabetes in the world. This rate is 10 to 15 times higher than the overall United States rate for diabetes and is predominantly of NIDDM. Compounding the increased prevalence of

Figure 11

Percent of People in the Most Obese Group, 1976



NOTE: Percent of people in the most obese group (Body Mass Index 28.49+ *for males, 35.29+* for females): United States, 1976.
SOURCE: Bonham, G.S., and Brock, D.W. (3).

diabetes is the associated prevalence of obesity among this tribe. Some studies have found that those of full American Indian heritage are more susceptible to the disease than those of lesser heritage. The implication is that genetic factors play a part in this disease, although changes over time suggest behavior as a possible additional predispositional factor. Some studies have suggested that the increased prevalence of diabetes and obesity among American Indians may be related to the ingestion of more calories, less fiber, and less physical activity compared to their ancestors. The complications of diabetes take a further toll on the American Indian population with a significant prevalence of diabetic kidney disease requiring dialysis and diabetic retinopathy resulting in blindness. Also, American Indians incur disproportionately higher rates of amputations because of vascular complications secondary to diabetes (5).

Hispanics

Among the 14.6 million individuals of Hispanic origin in the United States, the prevalence rate of diabetes among Hispanic Americans is more than three times the rate of the non-Hispanic White population (6,7). Although current prevalence data are limited to Mexican Americans, the nationwide Hispanic Health and Nutrition Examination Study (HHANES) will assess the prevalence of the disease in Mexican Americans, Puerto Ricans, and Cuban Americans and will evaluate their access to health care services for their diabetes. Population-based studies in the southwest United States show that Hispanic women in low-income urban barrios are four times more likely than Hispanic women living in the suburbs to have the disease, and Hispanic men are twice as likely. Although barrio women show a higher diabetes rate than barrio men, the ratio is reversed in suburban Hispanics. These findings are correlated with higher prevalence of obesity among Hispanic women living in the barrio. Obesity, however, is probably not the sole contributor to the increased prevalence of diabetes among Mexican Americans. This finding may in part be clarified by a study of the relation of obesity to acculturation, which found that, over time, acculturated Mexican American women became less obese; no correlation between acculturation and obesity was found for Mexican men (7). Inconsistencies and differences in prevalence rates for different clinical studies of Hispanics may be complicated by possible genetic contribution from an admixture with Native Americans known to be at high risk for diabetes.

From available data, it is clear that NIDDM is a major health burden contributing to excess morbidity and mortality in the Mexican American population. The data are still inadequate, however, to say with certainty whether this increased prevalence of diabetes is shared by other Hispanic subgroups. More data will be forthcoming for Puerto Rican and Cuban Americans in the Hispanic HANES.

Asian/Pacific Islanders

Few studies have analyzed data on diabetes among Asian/Pacific Islanders. One study with limited information compared Japanese Americans living in Hawaii, Los Angeles, San Francisco, and Seattle with diabetic Japanese living in Japan. Although not representative of the widely different Asian subpopulations, these data are important to indicate disparities in one group of the Asian minorities. Japanese Americans have exhibited consistently higher rates of glucose intolerance, diabetes, and mortality associated with diabetes than Japanese in Japan. In most populations, females suffer from diabetes more than men. Among the Japanese Americans, however, this situation is reversed: Males have higher rates of diabetes than females. Diet, which is much higher in fat in Japanese Americans than Japanese in Japan, may explain some of the difference in the prevalence of diabetes between these groups. Sociocultural effects with psychological consequences may likewise contribute to the reversal of the ratio between the sexes: older Japanese American men are likely to have suffered displacement from their roles as family leaders during the reassimilation of Japanese into our culture since World War II (8). Data reviewed on these differences are only suggestive and point out the need for additional research on psychological and psychosocial correlates to diabetes and its consequences.

Prevention of Diabetes and Its Complications

Almost half the cases of diabetes in Americans are likely to go unreported, according to the estimate of the American Diabetes Association (ADA). Some 10.6 million Americans--about 4.5 percent of our population--may suffer from the disease. Because of the close association of diabetes with obesity, it also has been estimated that control of obesity could prevent almost 300,000 cases a year. Obesity control among minorities, therefore, might prevent a part of the disproportionate burden of diabetes experienced by minority populations.

With significant advances in the treatment and the management of diabetes during the past decade, increased attention has been paid to identifying strategies to reduce the complications of diabetes. Exemplary programs that provide continuing outpatient diabetes care to populations that are more than 80 percent Black have operated in Memphis, Tennessee since 1962 and in Atlanta, Georgia since 1968. Both programs use a team approach in educating and treating diabetic patients. The major goal of these programs is to prevent or delay the development and progression of complications in patients diagnosed with diabetes. Reports of results from these programs support the hypothesis that a preventive approach to the consequences of diabetes is effective in terms of therapeutic effects and cost control(9).

Since diabetes has reached epidemic proportions among some American Indian tribes, the Indian Health Service (IHS) has established Model Diabetes Care programs to develop, implement, and evaluate the effectiveness of culturally acceptable diabetes prevention and management programs (10). During the past six years, considerable progress has been made at specific IHS sites in delivering high-quality and culturally acceptable diabetes care. Although these sites serve only about 10 percent of the IHS service population, additional projects have been established recently to improve diabetes care and disseminate treatment strategies to other communities.

OPPORTUNITIES FOR PROGRESS

The following areas were identified by the Subcommittee as most significant in narrowing the disparity in the morbidity and mortality due to diabetes and its complications between the minority and nonminority populations.

- Availability and distribution of educational and informational materials for diabetic patients and those at risk of diabetes is vitally important. The scope of the National Diabetes Information Clearinghouse should be expanded to address the individualized needs of minority groups for diabetes-related information. When materials are developed, they should take into account the socioeconomic and educational levels of their target populations and, when appropriate, their language needs.

- Under the auspices of the National Diabetes Advisory Board, DHHS should support the development and inclusion of culturally specific materials in the education and certification process of diabetes educators.

- As part of the educational process of both patients and health care provider trainees, the synergistic effects of smoking, hypertension, hyperlipidemia, and obesity should be stressed as having adverse effects on the optimal management of diabetes.

- DHHS- and State-funded CDC Diabetes Control Programs, which have fostered participation of State and Federal efforts in diabetes control, have demonstrated positive impact. States should be encouraged to continue these programs.

- Existing federally funded programs such as the Women, Infants, and Children (WIC) programs and nutrition programs for the elderly should be used as possible opportunities to screen high-risk minority individuals for diabetes.

- It is believed that earlier treatment of asymptomatic diabetes can prevent diabetic complications inasmuch as it is the complications rather than the diabetes per se that are responsible for much of the diabetes-related morbidity and mortality. Because NIDDM is more likely to occur in those over age 50, blood glucose screening or measurement of the glycosylated hemoglobin (hemoglobin A1C) in minority individuals may be appropriate.

- The DHHS should encourage State and local health departments to address the needs of those who have diabetes in areas where high concentrations of minority populations are located. DHHS, through CDC and the National Diabetes Information Clearinghouse, can provide information and technical assistance to facilitate State and local diabetes control activities.

- Private organizations concerned with diabetes such as the ADA and the American Association of Diabetes Educators should be encouraged to focus some of their efforts and resources on issues specific to minority populations.

- In federally sponsored programs, DHHS should emphasize aspects of diabetic care related to prevention of diabetic complications that are the sequelae to poor diabetic control.

- Encouragement should be given to developing curricula for health care providers that are minority and culturally sensitive and to expanding the role of certain health professionals such as dietitians and nurse practitioners in the care of people with diabetes .

- Additional research on the prevalence of diabetes and its complications among the various minorities is needed. Well-designed epidemiologic studies are needed to characterize the distribution of diabetes among minorities and monitor trends in both prevalence of diabetes and related complications. Studies should elucidate the effects of variables such as physiologic differences, influences of various diets, acculturation, and genetic admixture on the pattern of disease.

- Environmental factors should be examined as possible contributors to the increased prevalence of diabetes during the past four decades among Native Americans, Blacks, Asian/Pacific Islanders, and Hispanics.

- The DHHS should encourage the development of national data on the prevalence of diabetes and its complications among the minority groups by oversampling the minority populations in national surveys.

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SUBCOMMITTEE ON HOMICIDE, SUICIDE, AND UNINTENTIONAL INJURIES

EXECUTIVE SUMMARY

Introduction

Injuries, intentional and unintentional, are among the leading causes of death in the United States. This Subcommittee investigated the major disparities in mortality between the majority population and Blacks, Hispanics, Native Americans, and Asian/Pacific Islanders in the areas of homicide, suicide, and unintentional injuries. Of these, homicide and unintentional injuries account for 35 percent of the excess deaths in Blacks under age 45 years. They remain important contributors for Hispanics and Native Americans as well.

Since the reordering of national health priorities that resulted in the Surgeon General's 1979 report, Healthy People, homicide increasingly has been recognized as a preventable public health problem for which the health sector needs to devote greater attention and energy. Traditionally, problems of violence and homicide have been left to the criminal justice system. Prevention of homicide is a new endeavor for public health, and it presents an opportunity for the public health field to deal with a previously ignored health problem.

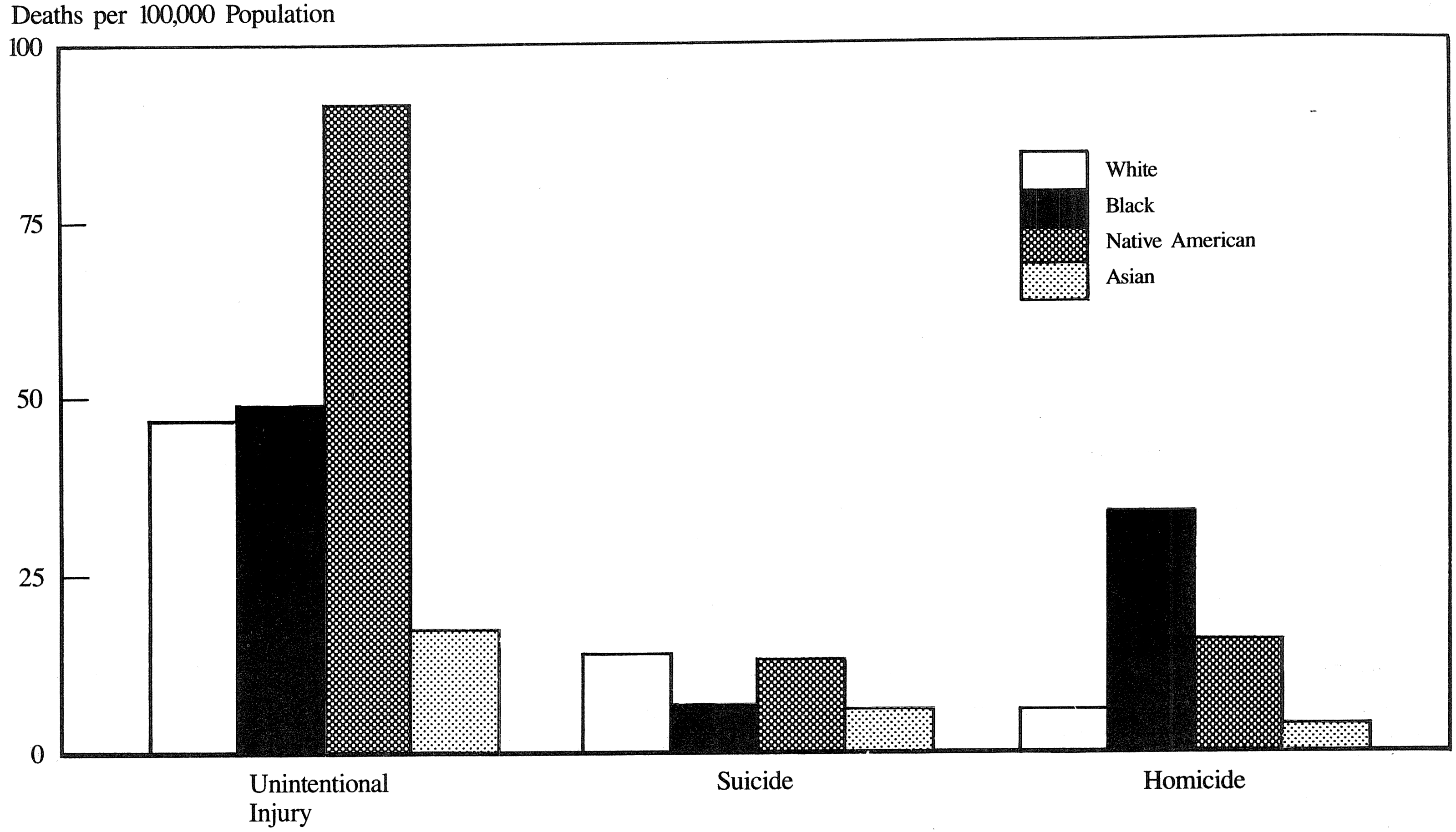
In 1983, homicide accounted for more than 19,000 deaths in the United States, an overall rate of 8.2 deaths per 100,000 population, a rate far higher than that of any other industrialized Nation (1).

Homicide is the 11th leading cause of death in the United States. For Americans of ages 1 through 65, homicide accounts for more than 726,000 potential years of life lost annually, an index for which homicide ranks fourth among all causes of death. (Potential years of life lost were computed to age 65. Data were computed from NCHS public use data tapes by the Violence Epidemiology Branch, Centers for Disease Control.) After heart disease, homicide accounts for more excess mortality among Black Americans than any other cause of death.

Analysis of national and local homicide data indicates that Black males and females and Hispanic males have rates of death far in excess of the rates of their peers in the general population (see Figures 12 and 13). Native Americans have rates of death from unintentional injuries far greater than the general population. Suicide and homicide also occur at higher rates among the Native American population. Chinese women over age 45 have suicide rates significantly in excess of those for White women of comparable age.

Figure 12

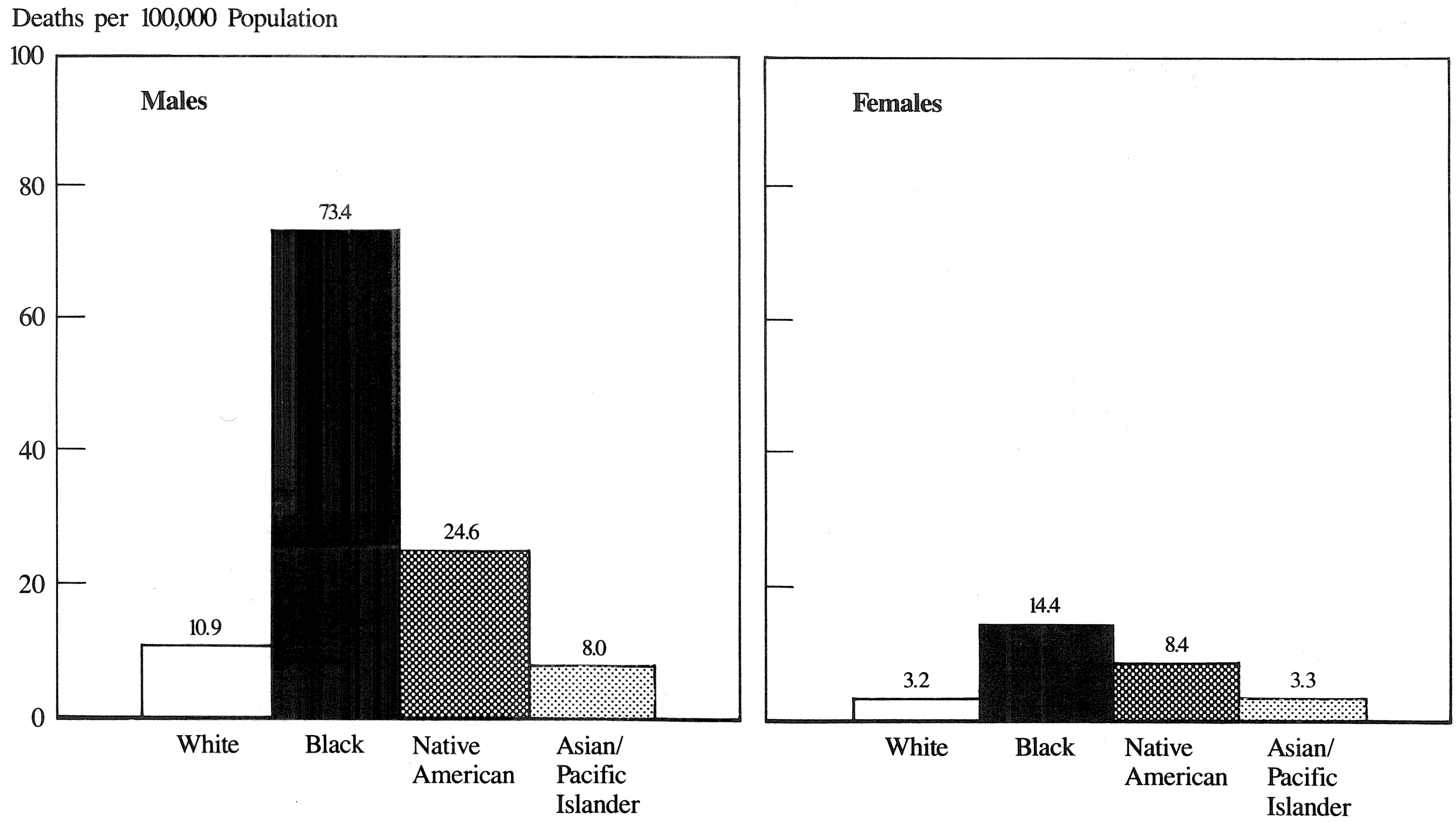
Death Rates from Unintentional Injury, Suicide, and Homicide by Race, 1977-1979



SOURCE: The Injury Fact Book, Baker, S., O'Neill, B., Karrf, R.S.

Figure 13

Average Annual Age-Adjusted Death Rates for Homicide for Persons Under 45 Years of Age, 1979-1981



NOTE: Death rates for Hispanics are not available. Death rates for Native Americans and Asian/Pacific Islanders are probably underestimated due to less frequent reporting of these races on death certificates as compared with the Census.

SOURCE: National Center for Health Statistics, Bureau of the Census, and Task Force on Black and Minority Health.

Blacks

- In 1983, Blacks accounted for 43 percent of homicide victims, although Blacks represent only 11.5 percent of the population (2).
- Black males have a 1 in 21 lifetime chance of becoming a homicide victim. The chance for White males is 1 in 131 (3).
- Black females have a 1 in 104 lifetime chance of becoming a homicide victim. The chance for White females is 1 in 369 (3).
- Higher Black homicide rates are found in all regions of the United States but are particularly high in the largest cities of the Nation (data compiled by the Task Force on Black and Minority Health).
- Black males have the highest rates of homicide: 69.2 per 100,000 for Black males compared with 10.3 per 100,000 among White males, in 1981 (1).
- Black females have the second highest rate of homicide: 12.9 per 100,000 compared with 3.1 among White females, in 1981 (1).
- Homicide is the leading cause of death for Black males of ages 15 to 44 (1).
- The homicide rate for Black males, ages 15-24, in 1981, was 78.2 deaths per 100,000 population compared with 14.4 per 100,000 for White males 15 to 24 years of age, a difference of more than five-fold (1).
- The homicide rate for Black males, ages 25 to 34 years, was 136.9 per 100,000 in 1981 compared with 17.6 for White males of the same age group, 7.8 times as great (1).

Hispanics

- National data are not available for homicide deaths among Hispanic populations, but data from the five-State southwestern region, where more than 60 percent of Hispanics reside, show that during the period 1976 to 1980, the homicide rate was 21.6 per 100,000, more than 2.5 times the rate of the non-Hispanic White population (7.7 per 100,000) in the same geographical area (4).

Native Americans

- The homicide rate among American Indians in 1980 was 18.1, 70 percent higher than the rate for the general population (5).

- American Indians have the highest rate of death from unintentional injuries or "accidents," both overall and at age-specific intervals. In 1980, the death rate from accidents among American Indians was 107.3 per 100,000, significantly greater than the rate of 42.3 per 100,000 for the U.S., all races. Motor vehicle injuries account for the majority of accidental deaths. Among American Indians, the death rate from motor vehicle injuries was 61.3 per 100,000 American Indians compared to 22.9 for the United States aggregate population (5).

- The death rate from suicides among American Indians was 14.1 per 100,000 in 1980, approximately 20 percent greater than the general population (5). Within some tribes, the rate is much higher. American Indian suicide victims are generally younger than those in the general population with suicide rates peaking at ages 15 to 39, compared with the general population in which suicides most often occur after age 40 (7).

Asian/Pacific Islanders

- The risk for suicide in Chinese females rises considerably after age 45 and increases with advancing age (6).

Selected Dimensions of Homicide

Homicide is seldom an isolated event. Much homicide is preceded by nonfatal conflicts and violence that come to the attention of police or are the occasion for visits to hospital emergency departments.

- Most homicides in the United States involve relatives and acquaintances. Of all homicides in 1983, 19 percent were committed by members of the victims' families, 38 percent by acquaintances, 15 percent by strangers; offenders were unidentified in 28 percent.

- Most homicides are committed against persons of the same race as the offender. In 1983, 94 percent of Black victims were slain by Black assailants, 88 percent of White victims were slain by White assailants (8).

- Among Black males of ages 15 to 24:
  --more than 65 percent of homicide deaths in 1979 were not related to criminal events.
  --54 percent of homicide victims were killed by persons known to them, usually acquaintances (8).

- Approximately 60 percent of all homicides are committed with firearms--handguns, rifles, or shotguns (7).

Factors Associated with Homicide

Considered as a public health problem, the high homicide rate can be related to psychological factors related to mental processes and behavior; external environment including physical, historical-cultural, social, educational, and economic environments; lifestyle, or individual and group ways of life, and physiological factors related to age and gender.

- Psychological factors. Homicide differs from other health problems in that it is the outcome of mental processes that result in conscious efforts to inflict physical harm upon another human being. There appears to be broad agreement that persons who commit homicide and other violent crimes fall into one of a number of groups. These include:

  --Normal, adequately socialized people exposed to extremely provocative or frustrating situations or circumstances. In some instances, their violence tendencies are exacerbated by inhibition-lowering drugs.

  --Persons committed to a violent lifestyle with supporting attitudes and values. This includes both normal individuals who consider that violence is appropriate in certain circumstances and other individuals who fail to develop adequate inhibitions against violent behavior because of disturbed developmental patterns. Although personal characteristics are related to participation in violence, actual violent behavior results from interactions of individuals with their environments. Among the external factors that facilitate or impede violent behavior are cultural attitudes towards violence, socioeconomic conditions, and availability of weapons.

- Environment. Although occupying one of the most healthful physical environments in the world, the United States has long had higher levels of internal violence than other industrialized nations. Violence is also accepted in American culture to a degree exceeding that of many other nations. Television programs, movies, and printed media often present violence as entertainment to the American public.

  Within the United States, as in other western countries, rates of homicide are highest in large cities. Numerous studies conducted over a period of many years note that violent crime, its offenders, and its victims are most often found in urban areas characterized by low income, physical deterioration, welfare dependency, disrupted families, lack of social supports, low levels of education and vocational skills, high unemployment, high proportion of single males, overcrowded and substandard housing, low rates of home ownership or single family dwellings, mixed land use, and high population density (9).

Blacks live in a society that has a long tradition of discrimination against minorities. Hispanics, Asians, and Native Americans have also been victims of discrimination.

- Lifestyle. Several types of behaviors are associated with increased risk for homicides. The National Institute on Alcohol Abuse and Alcoholism has estimated that about one-half of all homicides in the United States are related to use of alcohol (10). An estimated 10 percent of homicides nationwide are associated with use of illegal drugs (estimated by Research Triangle Institute, North Carolina). In some of the Nation's largest cities, the number of drug-related homicides is more than 20 percent (11).

- Physiological factors. Being male and being young are the most prominent risk factors for involvement in homicide as a victim or as a perpetrator.

OPPORTUNITIES FOR PROGRESS

Many, if not most, homicides are preceded by patterns of nonfatal violence that can provide targets for efforts at prevention (12). Research indicates that homicide often is the end product of youthful training in the use of violence that began in the home and through interactions with peers in school and communities (13). Children who engage in persistent antisocial and violent behavior from an early age are at significant risk for becoming deficient in a variety of social skills, including education, communication, and work habits that are essential to a well-adjusted adult life (14).

Development of Preventive Intervention Strategies

Enough is known about homicide risks to suggest some useful starting points for applying public health concepts of primary, secondary, and tertiary prevention. As interventions in these areas are developed and tested over time, some demonstrably effective prevention strategies may emerge.

Primary Prevention

Primary prevention in the public health sense involves averting the initial occurrence of a disease, defect, or injury. In the case of homicide, primary prevention efforts need to be directed at those social, cultural, technological, and legal aspects of the environment in the United States that facilitate perpetuation of the Nation's extraordinarily high homicide rates. The following examples illustrate the types of preventive strategies that need to be developed. Implementation of these strategies will require that health professionals join with others in an effort to eradicate factors that impair health by facilitating homicide.

- Effective health strategies to prevent homicide must begin by enlisting greater public and professional interest and concern. The Public Health Service should take the lead in developing a new health promotion campaign specifically focused on homicide. The campaign should increase public and professional awareness that homicide is a serious national problem and that it is preventable. By comparing the American homicide rate with that of other nations, the campaign can also convey the message that the high rate of American homicide can no longer be tolerated.

- Physicians and other health care providers need to develop greater understanding of homicide as a public health problem for which the health sector should accept greater responsibility. Information on homicide and other violence should be incorporated into the curricula of medical schools, nursing schools, schools of social work, and continuing professional education.

- Community self-help. High rates of homicide and other violence are problems for which Black, Hispanic, and Native American communities need to accept greater ownership. By accepting responsibility for homicides that occur within their own communities, minority citizens empower themselves to press more actively for adequate and comprehensive efforts at prevention. Community approaches might include:

  --developing a continuing media campaign to educate the community and the general public that violence and high homicide rates are unacceptable. Messages should be culturally relevant and feature appropriate role models who are suitable for the target population.

  --establishing a consortium or community council of civic, religious, political, youth, and other community leaders who are committed to the proposition that violence and homicide in the community are unacceptable and preventable. This group would meet regularly to exchange ideas and information and, with help from other experts if needed, would develop constructive approaches to prevention of violence and homicide.

  --developing an information bank on violence and homicides that occur in the community.

  --mobilizing community resources to maximize the potential for violence reduction and homicide prevention.

  --developing a community policy toward firearms.

--developing model programs for community-based homicide prevention. Promising approaches are provided by such projects as the House of Umoja in Philadelphia (15), which has reduced gang-related homicides among young Black men; Neighborhood Crime Prevention projects, and the "Big Brother" program, which could provide Black role models for high-risk children from single-parent families.

--reducing violence on television. Several consumer and professional groups have begun advocating reduction of television violence. The National Parent Teachers Association and other organizations have issued program selection guidelines to enable parents to choose programs that demonstrate appropriate prosocial behavior.

Secondary Prevention

Secondary prevention in the public health sense involves halting or slowing the progression of a disease or other health problems. In the case of homicide, secondary prevention efforts should be directed to individuals manifesting early signs of behavioral and social problems that are logically and empirically related to increased risks for subsequent homicide. Family violence, childhood aggression, school violence, adolescent violence, alcohol abuse, and drug abuse are important focal points for efforts at secondary prevention of homicide. In the case of Black and Hispanic homicide, such preventive efforts are particularly needed in low-income, inner-city communities characterized by high rates of violence, family disorganization, unemployment, and school drop out.

- Family violence. More programs targeted to minority populations should be implemented to assist parents in parenting skills and in providing effective discipline that avoids excessive punishment.

- School-based education programs. Health education curricula extending from elementary through high school should include teaching children how to manage hostility and aggression by nonviolent means and channeling children's energies into education, work, community projects, and recreation. The Boston Youth Program is an example of an innovative school-based program for homicide prevention (16).

- Mental health programs. Because aggressive and antisocial behaviors in children are often associated with later delinquency and violence, improved mental health interventions are needed.

- Chemical dependency. Programs to reduce chemical dependency need to be incorporated into strategies aimed at prevention of homicide, suicide, and unintentional injuries in minority populations.

Tertiary Prevention

Tertiary prevention is concerned with situations in which a health problem is already well established, but efforts can still be made to prevent further progress toward increased disability and death. In relation to homicide, the problems of greatest concern are types of serious violence between intimates and acquaintances that are associated with elevated risk for homicide. Preventive efforts include:

- Hospital emergency departments can help to prevent homicides through improved medical record keeping on assaults. Homicides frequently are preceded by nonfatal assaults that bring victims into hospital emergency rooms. Records should include complete information on the circumstances of an assault and a method for identifying repeat victims of assaults. Blood alcohol levels should be measured and recorded as should evidence, if any, of drug use.

- Improved medical protocols need to be developed for identifying female victims of domestic violence. Many of these persons are not identified as battering victims because they do not volunteer this information and are not questioned about possible battering. A model emergency room protocol for identifying adult victims of domestic violence has been developed for hospitals in the State of New York and can be adapted for use elsewhere (17).

- Preventive interventions for victims of domestic violence should be introduced and tested in health care settings. A leader in this field has been the Harborview Medical Center in Seattle, which has developed a comprehensive intervention model that addresses the needs of victims of spousal violence, child sexual abuse, rape, elder abuse, and assaults by strangers (18).

- High rates of minority youth homicide in the Nation's largest cities are associated from time to time with violence that develops among rival youth gangs. The House of Umoja in Philadelphia provides an example of a successful, minority-directed program aimed at prevention and reduction of gang homicide. An important outcome of this effort was the formation of a community agency, Crisis Intervention Network, that has worked to prevent a resurgence of gang violence through communication with concerned parties and organizational efforts to combat the environmental and social conditions that foster gang violence (15).

Interventions Targeted Toward Native Americans

- The Indian Health Service (IHS) is focusing greater efforts at reducing death and disability from unintentional injuries, suicide, and homicide by improving:

  --prevention activities in the form of health education, risk identification, and working with other agencies responsible for law enforcement programs.

  --assistance to injury victims through improved IHS clinical services, emergency medical services, including assisting communities to improve ambulance services.

  --rehabilitation through clinical services and alcohol programs, mental health, and health education.

  --providing medical personnel with training in emergency care skills.

- Efforts to prevent injuries from motor vehicle accidents should include encouraging use of seat belts and child restraints in cars and trucks, use of helmets for motorcyclists, and restraints for passengers riding in the backs of pickup trucks.

- Because American Indian tribes differ considerably in language, culture, and traditions, consultation with tribal leaders is vital when planning or implementing health interventions targeted toward American Indians.

Efforts at preventing or reducing unnecessary deaths from homicide, suicide, and unintentional injuries in all minority populations require a cooperative approach from diverse disciplines outside the traditional public health sector.

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SUBCOMMITTEE ON INFANT MORTALITY AND LOW BIRTHWEIGHT

EXECUTIVE SUMMARY

Introduction

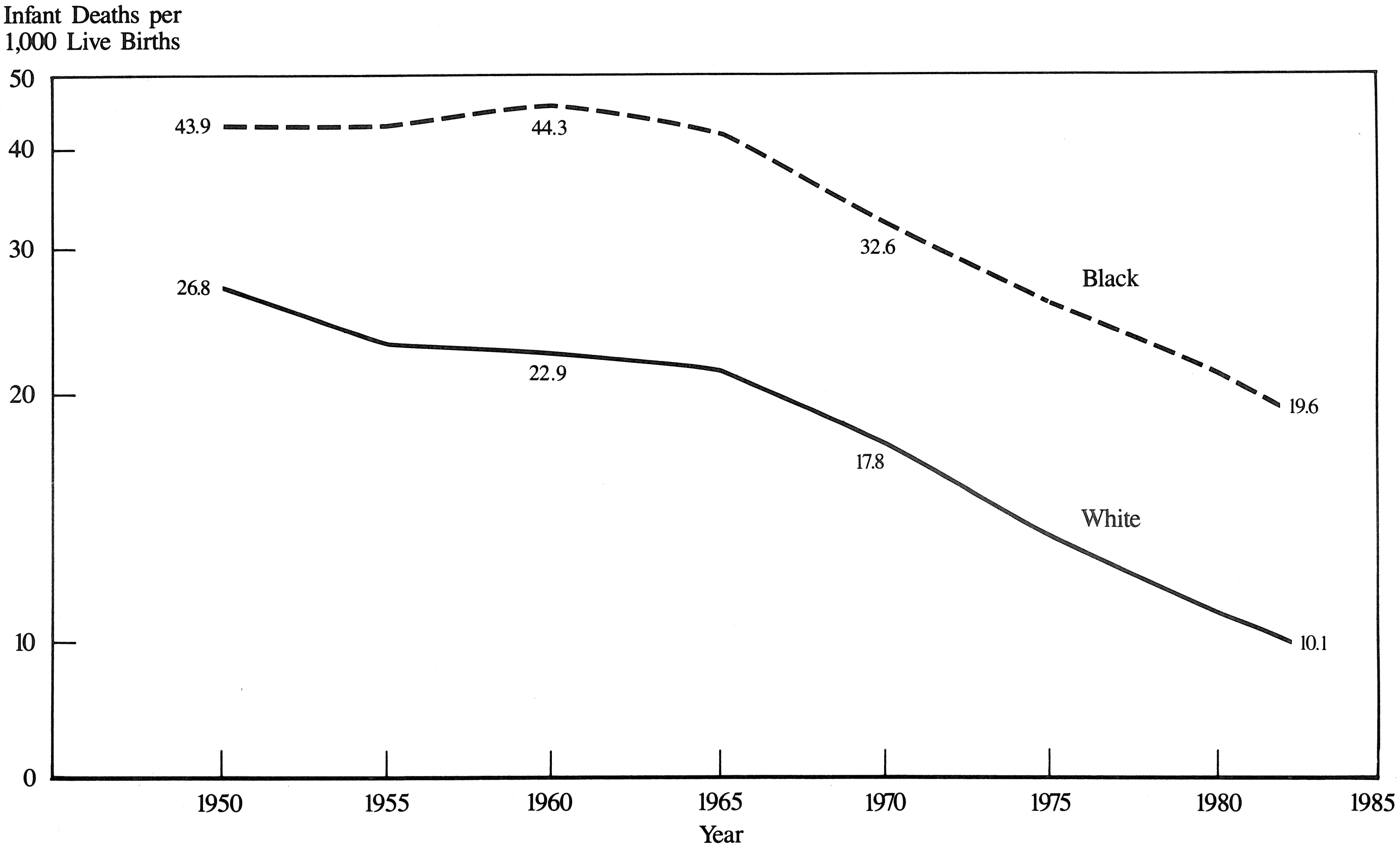
The death of an infant is a personal tragedy and an event that causes us to look at the functioning of medical and social systems. Infant mortality, the rate at which babies die before their first birthday, has been viewed historically as a sensitive indicator of the well-being of these systems. Under age 60, the rates of death from infant mortality are higher than for any other cause of death. In 1983, there were 39,400 infant deaths, a provisional rate of 10.9 per 1,000 births (1). While this represents a striking decline during the 20th century (from about 100 deaths per 1,000 live births in 1900) the United States does not compare favorably with other industrialized nations. Infant mortality rates are lower in the Scandanavian countries, Japan, most of Western Europe, Canada, and Australia (2). Although Blacks have shared in the decline in infant mortality, a significant disparity remains with Black rates being essentially twice those of Whites, 20.0 versus 10.5 in 1983, depicted in Figure 14.

Infant mortality rates have two main components: neonatal mortality rate or deaths of infants within the first 28 days of life, and postneonatal mortality or deaths from 28 days to one year. At the turn of the century, postneonatal deaths accounted for most infant deaths, but presently, neonatal deaths are predominant (Figure 15). Neonatal deaths are thought to reflect preexisting health conditions of the mother and the medical care she and her baby receive during pregnancy, at the time of delivery and shortly thereafter. There have been major improvements in the neonatal death rate in the past two decades. Postneonatal mortality is more reflective of living conditions, quality of care for children and medical care for treatable conditions such as infections. Of course, these two sources of risk for babies are not separate since the factors that influence a woman to obtain early prenatal care may be the same things that influence the quality of parenting and availability and use of services after the birth (3).

The sources of data for infant mortality are death certificates filed by States, which are then reported to the National Center for Health Statistics. States vary in their reporting of other characteristics of mothers and infants, which limits analysis of infant mortality by ethnicity. Other data sets such as birth certificates and surveys provide more data on ethnicity and include information on birthweight, which is a major risk factor for infant mortality. Insight into the variability of poor pregnancy outcome can be obtained by looking at low birthweight (LBW), specifically, the proportion of births that are below 2,500 grams, about 5-1/2 pounds.

Figure 14

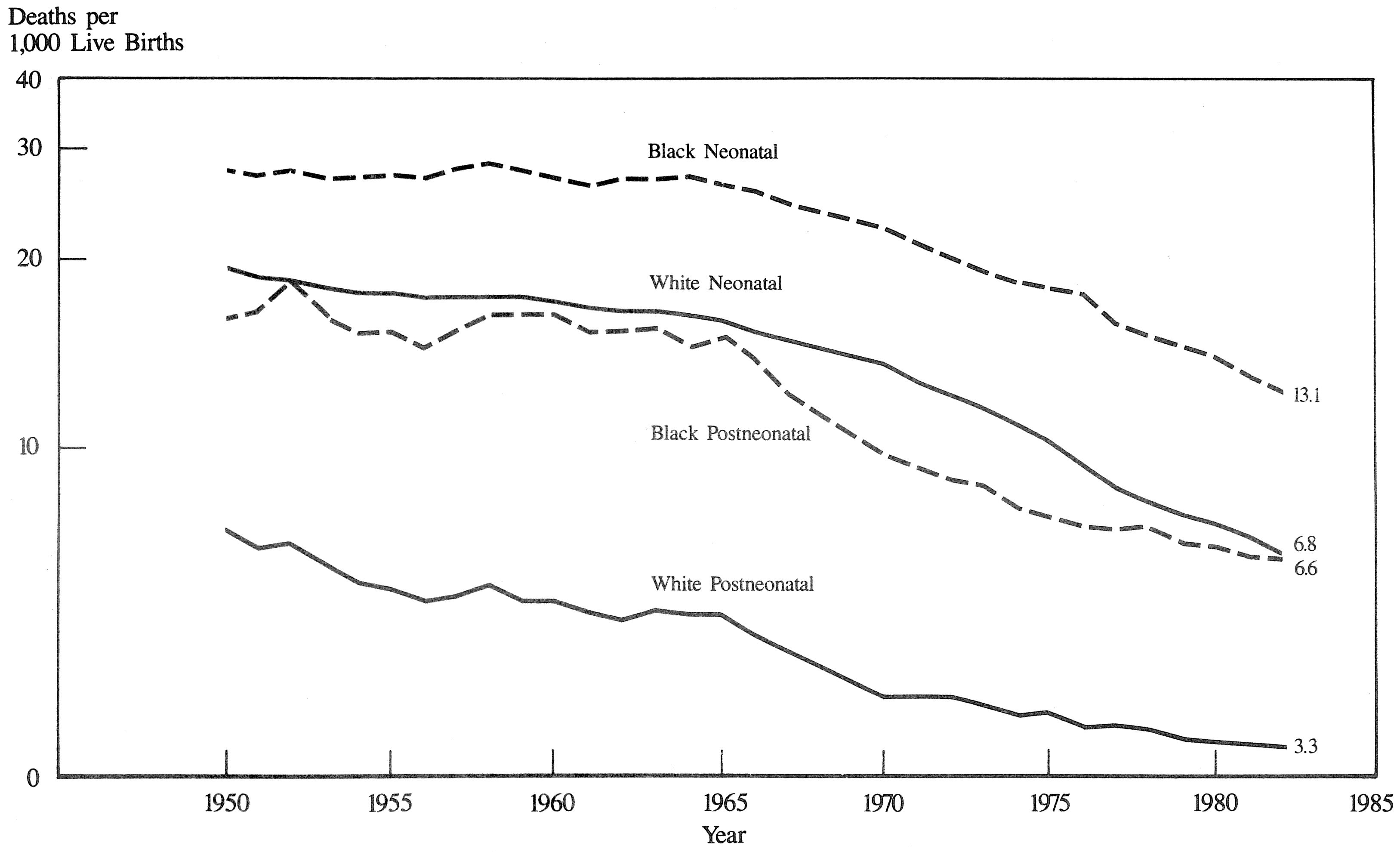
Infant Mortality Rates, 1950-1982



SOURCE: National Center for Health Statistics.

Figure 15

Neonatal and Postneonatal Mortality Rates, 1950-1982



SOURCE: National Center for Health Statistics.

The distinction between normal and low birthweight is a powerful one in regard to infant mortality, but LBW actually includes two subgroups: preterm deliveries and small for gestational age babies, which may or may not be preterm. In the research projects and data that are described here, it is not always possible to distinguish these two subgroups, although they are discussed in some detail in the full report.

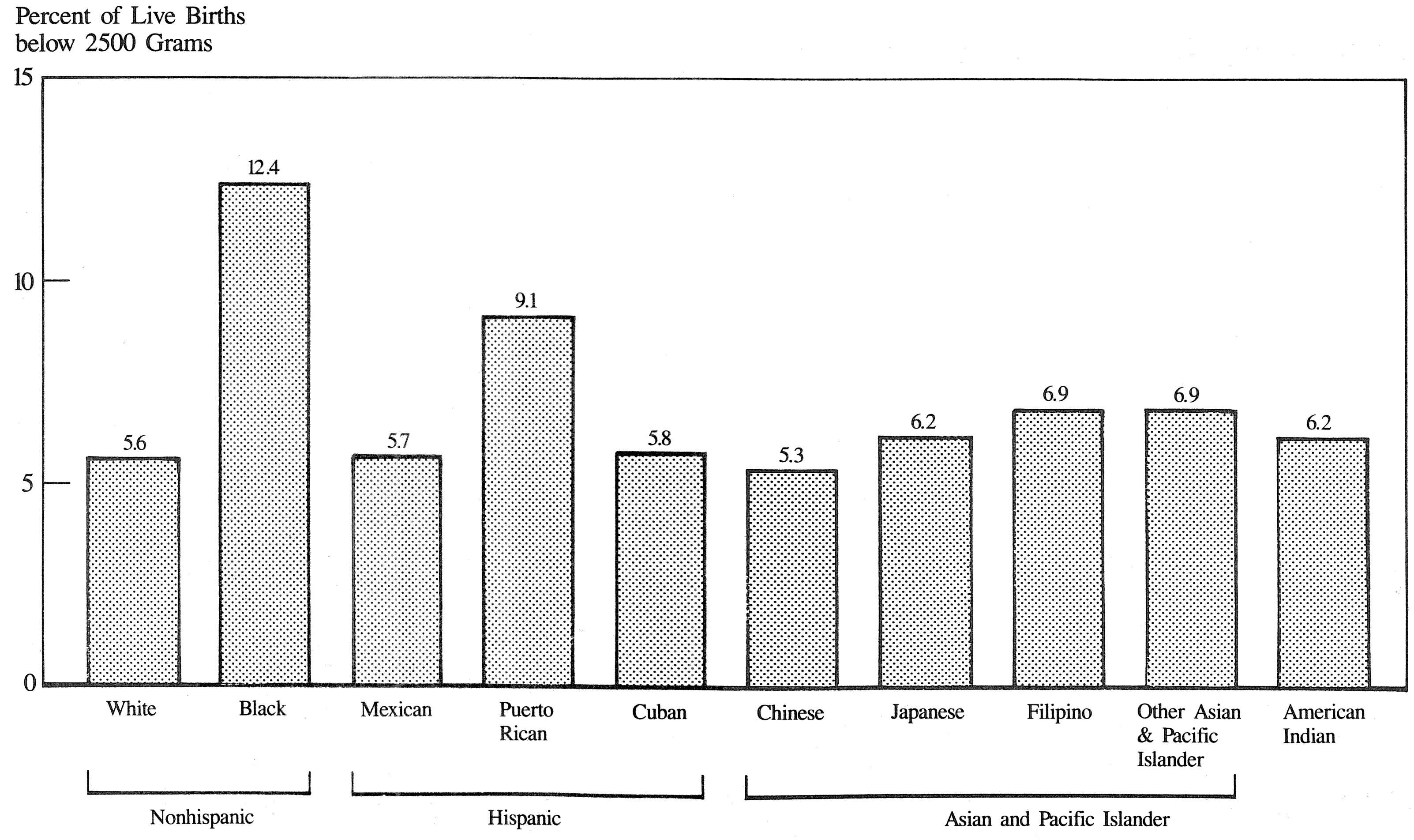
Although less than seven percent of babies are born with low birthweight, they contribute two-thirds of the deaths in the first month of life and approximately 60 percent of all infant deaths (4). Among White babies, 5.6 percent are LBW as opposed to 12.4 percent for Black babies. Puerto Ricans occupy an intermediate position (9.1 percent). Other Hispanic groups show better outcomes, approximately 5.7 percent for Mexicans and 5.8 percent for Cubans. Data for Hispanics are based on reports from 22 States which encompass an estimated 90 percent of Hispanic births. Asians generally show good perinatal outcomes. The best outcomes are among Chinese (5.3 percent), while 6.9 percent of Filipino births are below 2,500 grams. Data for American Indians show favorable birth outcomes and low birthweight rate of 6.2 percent (Figure 16) (5). A number of factors have been identified as relating to the risk of low birthweight and infant mortality. The broad range and complexity of these problems should lead to caution in presuming quick or simple solutions to the problem of infant mortality in the United States or the disparity between groups. This report addresses what we know about etiologic factors, recommendations for immediate action, and areas where reasearch is needed.

Etiologic Factors

The many risk factors associated with poor perinatal outcome among minorities that appear to be related to low socioeconomic status include: (1) low income and inadequate insurance coverage that often reduce access to appropriate medical care, (2) preexisting disease conditions, (3) poor nutrition, (4) inadequate housing and crowded living conditions, (5) limited maternal education, (6) stressful work environments, (7) disrupted families and lack of social supports, and (8) problems of transportation and child care that impede use of services. All are more prevalent among poor and minority women. Furthermore, childbearing patterns are related both to pregnancy outcome and ethnicity. Populations with worse pregnancy outcomes tend to include more teenage mothers, more unmarried mothers and more unintended births (Table 15). This report addresses how the factors leading to pregnancy and the care received during pregnancy relate to the well-being of the baby. When many of the social risk factors (education, marital status, trimester of first care, parity, age) are controlled, Black women still have twice the risk of bearing LBW babies as do comparable Whites. Nevertheless, the group of Black women controlled for social risk factors has half the LBW incidence of the Black population as a whole. This finding cautions us that this

Figure 16

Low Birth Weight Ratios According to Race and Ethnicity, United States, 1982



SOURCE: National Center for Health Statistics.

Table 15

Childbearing Patterns Among Racial and Ethnic Groups, 1982

	White	Black	Hispanic*	Asian	American Indian, Alaska Native
Age of Mother					
Under 15	4,153	5,395	1,288	88	126
15-19	357,948	140,534	60,369	6,278	8,749
20-24	958,509	207,640	115,275	23,872	15,364
25-29	961,053	143,748	90,393	36,303	10,236
30-34	503,847	69,781	47,999	26,394	4,886
35-39	136,664	21,341	18,056	8,146	1,627
40-44	19,027	3,966	3,809	1,351	287
45-49	853	236	201	131	14
Percent of Births to Mothers Under Age 20					
	12.3	24.6	18.3	6.2	21.5
Percent of Births to Mothers Over Age 35					
	5.3	4.3	6.5	9.4	4.7
Marital Status: Out-of-Wedlock Births					
Number	355,180	335,927	86,488	8,642	14,998
Percent	12.1	56.7	25.6	8.4	36.3
Parity					
Percent First Births	43.3	39.2	37.0	41.8	36.9
Percent High Parity (4+)	8.6	14.2	16.4	10.7	17.0

SOURCE: National Center for Health Statistics.

*Refers to births to residents of 23 States reporting Hispanic origins of the mother on birth certificates. These States accounted for an estimated 95 percent of all births of Hispanic origin in the United States in 1982.

is a difficult, complex issue that offers no simple solutions. Although much is known about the risks for LBW and infant mortality, much remains to be learned.

Based on the review of literature and NCHS data, four major areas can be highlighted:

- The importance of family planning/pregnancy prevention among teenagers, given the disproportionate number of teen parents who are minorities.
- The importance of assuring early and continuous prenatal care and appropriate levels of maternity, newborn, and infant care to minority women.
- The importance of aggressive outreach, case management, and expanded patient education services for minority women.
- The importance of adequately financing the providers and hospitals that care for minority women, who are often uninsured or rely on Medicaid.

Blacks

The neonatal mortality rate (NMR) for Blacks in 1981 was 13.4 per 1,000 live births, almost twice the rate for Whites (7.1). The postneonatal mortality rate (PNMR) for Blacks was 6.6, twice the 3.4 rate for Whites (6). In 1983, 11,060 Black babies died before one year of age (1).

There are three components of excess risk for infant mortality for Blacks: increased risk of bearing a low birthweight baby; increased risk of neonatal death among normal weight babies; and increased risk of postneonatal death, regardless of birthweight, relative to Whites. These risks are related to (but not fully explained by) childbearing patterns. Black women are much more likely to have a teenage birth, an out-of-wedlock birth, or a high parity birth, all of which are more likely to be unintended and associated with adverse perinatal outcome.

A focal point for lowering infant mortality is to improve services designed to help women, especially teenagers, avoid unwanted pregnancies. Pregnant Black women are less likely to receive prenatal care early in pregnancy. In 1982, 61 percent of Black mothers received care in the first trimester compared with 79 percent of White mothers. Black mothers were twice as likely as White mothers (10 percent versus 5 percent) to receive either no care or care beginning in the third trimester of pregnancy (5). It is also possible that there is a biologic role influencing birthweight that gives a different meaning to low birthweight for Blacks than for Whites. This issue deserves research attention. It is clear, unfortunately, that normal weight Black babies have far higher rates of neonatal mortality

Native Americans

National data for American Indians and Alaska Natives indicate that birthweight distribution and neonatal mortality for Native Americans are quite good and have shown improvement over time. Unfortunately, postneonatal mortality is quite high. The reduction in postneonatal mortality should be a high priority. Special considerations for American Indian and Alaska Natives are the high rates of death from unintentional injuries and the possible influence of diabetes or alcohol use of the mother on perinatal outcome or postneonatal deaths (10). As with all populations, health education, living conditions and access to health care are especially important. Use of well baby care and the quality of sick baby care must be considered.

Neonatal mortality rates and the birthweight distribution are favorable and have improved along with improvements in prenatal care for American Indians and Alaska Natives. These good outcomes are observed despite the relatively poor patterns of prenatal care among American Indians and Alaska Natives with far more women receiving late prenatal care or no prenatal care at all than among Whites. Birthweight has the predictable relationship with prenatal care--i.e., the earlier the care, the better the birthweight--but the level of care is depressed and birthweight is not. Clearly there is room for improvement in the receipt of prenatal care, but a number of questions are raised.

Data problems, evident for other subgroups, are even greater for Native Americans. Diversity within the Native American population and likely changes over time in the proportion of American Indians who so declare themselves in official documents create special problems. The Indian Health Service data systems are an excellent beginning for understanding infant mortality, but additional data are highly desirable.

Asian/Pacific Islanders

The Asian/Pacific Islander population within the United States is quite diverse, and available data are often not adequate. In general, perinatal outcomes are good among Asian/Pacific Islander women with relatively low rates of low birthweight (6.5 percent). Chinese had the lowest rate (5.3 percent) and Filipinos the highest rate (6.9 percent) of low birthweight. Asian/Pacific Islander mothers are less likely than White mothers to be teenagers (6 percent versus 12 percent among Whites) or unmarried (8.4 percent vs. 12.1 percent for Whites). Maternal education and socioeconomic status are relatively high among many Asians, and prenatal care patterns are good, with 75 percent beginning care in the first trimester. Southeast Asian refugees present a somewhat different picture, with considerable variability and numbers too small to permit national estimates of rates. Some groups, for example the Hmong, have cultural patterns of very early childbearing that may place them at greater perinatal risk.

OPPORTUNITIES FOR PROGRESS

The following are highlights of the Subcommittee's deliberations regarding needs in the area of infant mortality:

- Personal reproductive responsibility should be enhanced through a variety of channels, including enlarged content of health education for providers and lay audiences, improved family planning services, research on prevention of unplanned pregnancies, and the development of improved approaches to fertility regulation. Further research is needed on behaviors associated with unplanned pregnancies, including perceived risks and benefits of methods of fertility regulation. This is especially true for teenage women who constitute an important segment of the minority childbearing population.

- Since many risks exist before pregnancy or are actualized early in pregnancy, steps should be taken to improve our ability to increase minority women's knowledge of risks during pregnancy and of the value of early and ongoing prenatal care. Research should elaborate the mechanisms by which the planning of pregnancies influences prenatal care and pregnancy outcome. Behavioral approaches to accurate dating of pregnancies should be explored.

- Use of prenatal care is influenced by the availability and accessibility of services. Many minority women, especially teenagers, receive their care through Federal or State-subsidized services or must pay for their own care. It is important to lower barriers created by coverage patterns for high-risk women low physican participation in Medicaid; problems with processing claims/eligibility quickly; caring for women who move during pregnancy; and others.

- Provision of technical assistance to State Title V agencies and other providers of care for mothers and infants interested in trying innovative approaches to funding care programs. Continue to monitor changes in expanded eligibility resulting from the Child Health Assistance Program (CHAP) in terms of characteristics of new eligibles, use of care and outcomes.

- High-risk women often need a larger array of services than others, and minority women are often high risk. The Subcommittee recommends ways to address these needs through expanded nutrition supplements, health education services, provider and patient education regarding risk assessment, and recognition of preterm labor and removal of arbitrary limits to services.

- Special attention should be given to aspects of prenatal care designed to identify women at risk of preterm labor. Presently there are innovative programs designed to identify and treat women at risk of preterm labor. These programs should be evaluated and considered for replication. Similarly, regionalization of care for women at high risk has been valuable and should be maintained.

- Although it is clear that early prenatal care is valuable, it is also clear that more should be known about how the specific components of care influence women's likelihood of coming for care and the effect of that care. Research is needed on the other health-related behaviors women may engage in during pregnancy that are related to pregnancy outcome but not necessarily a part of typical prenatal care. Special attention should be given to improving techniques to help pregnant women stop smoking.

- A number of conditions can be screened during pregnancy and knowledge of identified risks can then influence treatment or type of care. For example, Black women are at increased risk of bearing twins, and multiple pregnancies are high risk for early labor and adverse outcome; recent immigrants, especially Asians and those from parts of the developing world, are at risk of hepatitis B which affects the neonate and creates a carrier pool. Screening for such conditions is important to secure optimal care.

- A number of areas require improved research and attention by health providers, such as the role of stress, type of employment, transportation problems, and nutrition on pregnancy, the use of prenatal care and pregnancy outcome. Comprehensive health education for providers and information campaigns for the public could address avoidable health risks during pregnancy.

- A model state brochure should be developed for low-income pregnant women describing simply how and where to obtain Medicaid eligibility, the need for early care, avoidable risks to the fetus (e.g., smoking), and a list of providers accepting Medicaid. Assure that the message is delivered to high-risk groups in culturally appropriate forms.

- The Federal Government should continue to review and sponsor mechanisms to aid in local and state investigations of infant deaths in areas of high or changing infant mortality rates.

- The Department should coordinate with the American College of Obstetricians and Gynecologists and other professional organizations to review the influence of malpractice insurance on Medicaid participation and to seek an appropriate vehicle for assessing the role of uncompensated care in influencing pregnancy outcome.

- Assess evaluations and consider replication of innovative models of active follow-up programs to support families of infants at high risk of postneonatal disease. Support groups in other disease areas have had documented successes. Their value in regard to assisting parents of high-risk infants should be evaluated.

- Many postneonatal deaths are due to injury. The recent improvements in seat belt protection for children and childproof containers should serve as a model for preventing other sources of accidental death for infants. The 1990 Objectives for the Nation which have focused attention to the role of seat belts in child safety, and other areas (such as death from burns) could be considered at the mid-decade review.

- To understand better the interplay of social, biological and environmental factors associated with low birthweight and the relationship of low birthweight to infant mortality among minority groups, research should address birthweight-specific mortality rates for minority groups, investigate the role of nutrition or generational effects as an influence on the relatively high low birthweight rates for apparently low-risk Black women, and attempt to verify and explain the apparently favorable birthweight distributions found among Mexican American and Native American women.

- Research on the perinatal period has paid far less attention to the factors associated with postneonatal mortality. It is recommended that research be increased and directed at the preventable causes of postneonatal mortality, including the interrelationship of individual and familial behaviors, health care delivery factors, use of well and sick-baby care; immunizations for babies, and sources of accidental death such as risks associated with substandard housing.

- Research is needed on the link between economic conditions and infant mortality to specify better the interplay between the individual, financing differences, and structural factors. Expanded research on economic aspects of infant mortality in conjunction with sociocultural factors may help explain the relatively good outcomes experienced by Asian/Pacific Islanders and Native Americans.

- Most of the large programs, like Maternal and Infant Care (MIC), Improve Pregnancy Outcome (IPO), and the Special Supplemental Food Program for Women, Infants, and Children (WIC) have only partially been evaluated. More complete evaluations of these programs should be undertaken. Evaluation techniques have not kept pace with the programs; specific recommendations for strengthening evaluations are made in the Subcommittee report.

Evidence is accumulating to document the value of nutrition programs (such as WIC). Continued research and implementation should be considered.

- States should be encouraged to modify their birth and death certificates to include better identification of ethnic groups, especially Hispanics (already available on the certificates from 22 states). Furthermore, the addition of certain new items of information on the birth certificate (such as smoking, prepregnancy weight and height, and insurance coverage, and so forth) could be extremely beneficial in monitoring and studying the factors that influence pregnancy outcome.

- The National Infant Mortality Surveillance project done by CDC in collaboration with NICHD, HRSA, NCHS and the State vital registrars is developing a national data base of linked birth and death records for 1980 that will provide valuable data for analyzing infant mortality. The extension of this project to a linked birth and death record for all births and infant deaths is planned by NCHS. It is strongly recommended that this project begin with the 1982 birth cohort and be continued.

- Much of the evaluative research on infant mortality interventions was undertaken before some major changes in the U. S. demographics, poverty populations, financing shifts and changes in treatment systems. It is recommended that more contemporary data collection and prospective studies be undertaken. Data should be disaggregated by race and ethnicity, providing detail within major ethnic groups such as Hispanics, and adequate cases for comparison of adolescent with nonadolescent mothers.

- Data on insurance coverage of women and infants should be improved, especially in regard to those eligible and receiving Medicaid. These data could aid in our understanding of the role of financing and service delivery issues regarding infant mortality.

- Several national data bases (e.g., the National Natality Survey, the National Survey of Family Growth, and the National Longitudinal Survey--Youth Cohort) include rich data regarding pregnancy outcome. Improvements are recommended to enhance their value in regard to increasing knowledge of infant mortality/low birthweight for minorities and for research on teenage childbearing.

- Research on some ethnic groups (e.g., Indochinese refugees) will be better served by data collection and research efforts directly addressing their health concerns, rather than oversampling in multipurpose surveys. In other cases, valuable data sets exist regarding specific minority groups and could receive further analysis, e.g., the Puerto Rican Fertility Survey or Indian Health Service data.

The opportunities summarized above point to issues in education, information, research, and services where advances could be made. Infant mortality is a complex problem with many medical and nonmedical aspects. There are no simple solutions, but there are many things that we know about fertility, pregnancy and infant care that can help address the problem of infant mortality, a problem that takes a disproportionate toll on minorities.

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HEALTH SERVICES AND RESOURCES FOR MINORITIES

Introduction

The health status differences observed among U.S. population groups are in part related to the health care resources and services available to individuals. Some of the factors that cut across disease-related areas and affect health status patterns are: health services' utilization; health care financing; availability of health care facilities and personnel; health knowledge and behavior; and the influence of health education on health knowledge and behavior. The Task Force examined these factors and analyzed, where possible, their impact upon the health of minorities.

Access, Utilization, and Financing

National surveys measuring current health care utilization indicate that minority populations receive health care services at levels similar to those of nonminorities; differences, however, in the patterns of utilization remain. The large differences in gross indicators of health care access and utilization, such as number of visits to a physician, that existed between nonminority and minority populations have diminished since the creation of Medicaid and Medicare. Both of these important health-financing programs have enabled large segments of disadvantaged and older minorities to gain access to needed health care. However, the poor health status observed in many minority groups and differences remaining between minorities and nonminorities in types of care and financing, suggest that minorities still have poorer access to and use of comprehensive and high-quality health care.

Detailed national-level data describing the health service patterns of U.S. minority populations are not available. The minority groups for whom the most health information is available are Blacks and, to a lesser extent, Hispanics. Data describing Hispanic subgroups are limited and generally obtainable only through combining several years of national survey data or through small studies. Comprehensive data on the health service patterns for many Native Americans are not available. Although the Indian Health Service (IHS) data describe the extent and nature of the services provided, it serves only those residing on or near reservations, approximately 60 percent of the American Indian and Alaska Native population (*). The

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* Calculations are based on the following formula:
1980 Census = 1.5 million American Indians and Alaska Natives
IHS service population = 888,000 (i.e., 59 percent of total)
Two-thirds live off the reservation.

Asian/Pacific Islander population includes many subgroups that differ in cultural characteristics, health needs, and health care patterns. Because few sources identify subgroups and because Asian/Pacific Islanders account for less than 2 percent of the U.S. population, very little information about health services to this minority and its subgroups exists. Most data on Asian/Pacific Islanders reflect dominant subgroups such as the Chinese, Japanese, and Filipinos. The following discussion, therefore, concentrates on information relating to Blacks and, when available, other minorities.

Use of Health Professionals

From 1978 to 1980, the National Health Interview Survey, reported 4.7 as the average annual number of physician visits per person in this country. The number of visits was similar for Black, Hispanic, and White populations, although Mexican Americans, at 3.7 had a noticeably fewer visits. When these data are examined by age, however, more pronounced differences in utilization patterns emerge. The average annual number of physician visits for minority children is fewer than for White children. On the average, White children under age 17 visit a physician 4.5 times each year compared to 3.5 for Hispanic children and 3.2 for Black children (1). Vaccination rates among children, an important indicator of the use of preventive health measures, also show differences. Sixty-seven percent of White children, one to four years old, were vaccinated against measles in 1983 compared with only 57 percent of minority children (2).

A clear pattern of lower use of preventive health services is seen among minority adult populations. Nearly eight out of ten White women seek prenatal care during the first trimester of pregnancy though only six out of every ten Black women seek this care. Except for Cuban women, rates of prenatal care in the first trimester among Hispanics women from the 22 States that report Hispanic origin are lower than those of Black women; rates for Native American women are among the lowest of any racial or ethnic group in the United States. Asian/Pacific Island women, as a group, have levels of first trimester prenatal care similar to those of White women (2); however, rates vary significantly between the different subgroups. Unfortunately, detailed national information about screening and diagnostic services received by different population groups is not available. Limited studies indicate that nonminorities receive more cancer-screening tests, breast examinations, prostate palpations, and proctoscopies than do minorities (3).

Dental services are used less frequently by minority populations than by nonminorities. From 1978 to 1980, 56 percent of Whites reported visiting a dentist in the previous year compared with 37 percent of Blacks. Hispanics also visited dentists less frequently than Whites. Among Hispanic subgroups, Mexican Americans, at 35 percent, had the lowest percentage of dental visits in the previous year (1). Forty-eight percent of Asian/Pacific Islanders and 40 percent of Native Americans (4) reported visiting a dentist during the previous year. The lower use of dental services by minority populations begins in childhood; 68 percent of White children, ages 4 to 16 years, were reported to have seen a dentist in the previous year. The rate was 44 percent for Black children, ages 6 to 14 years, and 39 percent for Mexican American children (1).

Sources of Care

Having a usual source of medical care has been found to be a good predictor of use of health services and suggests a greater continuity of care, associated with improved health outcomes. A 1977 study of national medical care behavior reported that 13 percent of Whites have no usual source of medical care; 20 percent of Blacks and 19 percent of Hispanics reported this (5).

Continuity of health care is related to the location of medical service. There is greater continuity of care when patients are able to revisit the same provider. Seventy percent of the White population reported using a physician's office as their usual source of care compared with 54 percent of Hispanics and 46 percent of Blacks. Twice as many Blacks and Hispanics as Whites reported hospitals and health clinics as their usual source of medical care (5). The widespread use of hospitals and public health clinics for medical care by Blacks also was documented in the 1980 NHIS. In that year, 25 percent of all visits to physicians made by Blacks occurred in hospital clinics or emergency rooms compared with 11 percent by Whites (6).

The same survey also revealed differences in the patterns of hospital utilization by minority groups. From 1978 to 1980, Blacks reported hospital stays that averaged two days longer than those of Whites (11 days versus 9 days). The average hospital duration for Hispanics was slightly shorter than that for Whites (1).

Ability to Pay for Services

A prerequisite for access to medical care is the ability to pay for services, which in turn largely depends on income and health insurance. The median income for all Black and Hispanic families is substantially lower than for White families resulting in less disposable income available for the direct and indirect purchase of health care. Family income for Asian/Pacific Islanders, however, is not low, due in part to living patterns in which several wage-earning adults live in the same household, although their individual wages may be low. Viewing the Asian/Pacific Islander household income only on a national average level masks subpopulation differences and the wide diversity of income levels.

Health Insurance

Payment for health services is generally made through some form of health insurance. Although a survey conducted in 1982 by the Robert Wood Johnson Foundation found that only about nine percent of the American population had no health insurance coverage of any kind, Black and Hispanic groups had noninsurance rates that were two to three times higher than Whites (7). Recent systematic information about the insurance status of Asian/Pacific Islanders and American Indians and Alaska Natives living outside IHS service areas is not available. The predominant source of funding for health care for those under 65 years old in the United States is employment-based third-party health insurance. However, because most minorities experience higher unemployment rates, fewer minorities can obtain this kind of health insurance (8).

Medicaid has become an important source of health insurance for many minorities. The 1982 Robert Wood Johnson survey found that 20 percent of Blacks and 13 percent of Hispanics use Medicaid as their only source of health insurance (7).

Although Medicaid has enabled many minority families to have access to medical care, reimbursement schedules limit the range of available health services, and frequent changes in program eligibility tend to disrupt the continuity of health care.

In addition to Medicaid, funding for medical services for refugees is available through Title XIX State medical programs. This program particularly affects several of the Asian/Pacific Islander populations. During their first 18 months in this country, most Southeast Asian refugees are covered by Medicaid or receive medical help through Refugee Medical Assistance.

Having some form of health insurance is related to using health services and to whether people report having a usual source of medical care (9). Twenty-five percent of the medically uninsured report having no usual source of care compared to only 13 percent of those covered by private insurance, 11 percent of those covered by Medicare, and 15 percent of those enrolled in Medicaid (5).

The continuity of health insurance, generally defined as the proportion of the year a person is covered by health insurance, is related to employment status and to changes in Medicaid eligibility, and has an impact upon health care utilization. Greater proportions of minority groups are without insurance for some portion of the year than are the nonminority population. Those with less continuity of health insurance use health services less frequently than those who are insured all year round (9).

Though all Americans 65 years of age or older are covered by Medicare, it does not provide full reimbursement for all health care needs. The White population supplements Medicare with private insurance twice as often as does the Black population (69 percent versus 31 percent) (10). Although data are sparse, an analysis of Medicare utilization information in 1978 revealed that more Whites than non-Whites were reimbursed for physician and other medical services (597 per 1,000 of enrolled Whites versus 521 per 1,000 enrolled non-Whites). Reimbursement amounts per person served that year also appear to be more for Whites ($373) than for non-Whites ($348) (11).

Knowledge of the health care utilization and access patterns of minority populations is fragmented, because little or no information is available for minority population subgroups. More data on these populations is needed for a fuller understanding of the health care services they are actually receiving and need.

Health Professionals

One of the key elements of quality health care is the availability of well-trained health care providers. The degree to which the availability of these professionals differs between minority and nonminority groups may play a crucial role in reducing disparities in overall health status. The Task Force compiled and analyzed data on the distribution of health personnel in counties where at least 20 percent of the population consists of a single minority (12). Although analyses indicate that some counties with a high density of Blacks, Hispanics, and Asian/Pacific Islanders had numbers of health care professionals at least equal to the number located in areas with a lower proportion of minorities, this "index of availability" of care may be misleading. County-wide distribution of physicians and other health care professionals does not reveal practice patterns, accessibility, or actual availability of those professionals to individual minority communities. Furthermore, since many of the counties analyzed are urban, this information may simply reflect the tendency for health care professionals to cluster in cities. County-level analyses of physician distribution, for example, do not indicate the number of professionals who accept Medicaid/Medicare payments or whose practices might be located in minority areas. Many areas with larger numbers of professionals also tend to be those with medical schools or other institutions whose teaching staff are not available as practitioners. Thus, the truly available resources for minority health care may be considerably less than implied by statistics.

Existing studies suggest that health professionals who are from the same cultural background as their patients may be able to communicate better with their patients and thereby have a positive influence on many of the factors that affect health outcome. However, with some notable exceptions among selected subgroups of Hispanics and Asian/Pacific Islanders, minorities are substantially underrepresented among students and practitioners of virtually all major health and allied health professional disciplines (13). Most minorities receive health care from providers who do not share their own ethnic/cultural background.

Minorities are also underrepresented in research and teaching positions in health sciences. An insufficient number of role models and teachers who are sensitive to the training needs of minorities has a negative effect upon the training of future minority health professionals.

Although data are limited on the number, distribution, and practice patterns of specific minority health professionals, current information suggests the following:

- The proportion of Blacks among health professionals is relatively low and not likely to change appreciably in the near future. In virtually none of the States surveyed for this report do the number of Black graduates of medical, dental, or pharmacy schools even approach the proportions of Blacks in the population. If the number of Black graduates continues to rise, as it has during the past two decades, it is still unlikely that the proportion of Black professionals will significantly increase in the near future.

- Studying the distribution of health professionals within the Hispanic population is particularly difficult because of the various subpopulations in this group. Nonetheless, Mexican Americans and Puerto Rican living in the U.S. appear to be significantly underrepresented in the health professions. Generally, Hispanic health care providers are unevenly distributed among Hispanic communities.

- Asian/Pacific Islanders, as a group, appear to be disproportionately overrepresented among health professionals in training and in private practice. However, data for identifying the distribution of health professionals within Asian/Pacific Islander subgroups are not readily available nor are data identifying that proportion of Asian/Pacific Islander health care providers which cares for Asian/Pacific Islander patients.

- Many American Indians and Alaska Natives receive health care through the Indian Health Service, a health delivery system created for the purpose of meeting their health needs. The IHS is attempting to make greater use of indigenous health workers and to tailor services more closely to individual tribal needs. However, for American Indians and Alaska Natives not living on or near reservations--nearly two-thirds of the total population--the scarcity of American Indian and Alaska Native health providers becomes problematic when cultural differences affect access to care.

Health Education and Information

The higher rates of the incidence and prevalence of certain health conditions for minority populations is a compelling reason to identify ways in which the health status of minorities can be improved through health education interventions. Data have clearly illustrated that each of the six priority areas that contribute significantly to the disparity in health status has components or controllable risk factors that are amenable to health education efforts. Such factors include the use of tobacco, the maintenance of healthful dietary practices, and the management of stress (14).

Behavioral, social, cultural, and ethnic variables that exist within minority populations may affect the delivery of health information to a significant degree and should be considered when designing a health education intervention. Although some similarities do exist within a minority group or between minority groups, differences in such aspects as educational level, socioeconomic status, and religion should be examined for their potential impact on the design and implementation of a health education program. A common characteristic found in each of the four minority groups addressed by the Task Force is the important role played by the family in disseminating health information and in providing support to assist the individual in complying with a prescribed health action (15). It remains difficult, however, to identify those specific behavioral and/or cultural variables that affect health behavior within each minority population because of the limited amount of research concerning minority health beliefs, attitudes, and practices. Clearly, additional data are needed in this area to tailor health education programs more carefully to the needs of minorities.

Health education interventions for the four minority groups identified should be directed at improving the awareness of individuals and communities about controllable risk factors associated with the causes of excess death and disability (16). Such measures can occur in a number of settings--schools, worksites, medical care facilities, and communities. Health education activities should foster the development of lifestyles that maintain and enhance the state of health and well-being as well as increase public and professional awareness of risk factors that affect minority health status.

Variables that affect the development and implementation of a health education intervention include the nature of the target population, the types of interventions available, and the kinds of outcomes to be expected--health or otherwise (17). Above all, the educator must understand the critical problems, the likely delivery mechanisms, and the strategies for implementation.

Specific priority health behaviors, among the most important in minority populations and most likely to be affected by health education interventions include: smoking, diet and nutrition, social support behaviors, exercise, alcohol and drug misuse, maternal and child health issues, safety issues, stress management, sexually transmitted diseases, and teenage pregnancy.

Because so many factors can enhance or impede the effectiveness of a health education strategy, it is important to consider the factors that contribute to making a health message and its dissemination special for a given population. Such factors might include the influence of community leaders and groups, the community's attributes, an individual's perception of barriers to care and to engaging in a specific health action, the environment, demographic parameters, the nature of the innovation, and the channels available for communication.

Differences in health status underscore the importance of providing health education to minority populations; however, consensus has not been reached on how best to develop health education programs and strategies, how to effect change, and how to disseminate these strategies. Therefore, efforts need to be expanded or initiated to elucidate those factors that contribute to the design, implementation, and diffusion of successful health education interventions in all minority populations and subgroups in the United States.

Conclusion

Differing patterns of health services' utilization, health insurance coverage, access to health providers, and the availability of appropriate health education materials and programs contribute to the disparity in health status between minority and nonminority groups. Further study and identification of specific ways to improve minority access to each of these health resources is essential to improving the health status of minority groups in the United States.

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Inventory of DHHS Program Efforts

Survey of Nonfederal Organizations

INVENTORY OF DHHS PROGRAM EFFORTS IN MINORITY HEALTH

An inventory of Department of Health and Human Services' program efforts in minority health was compiled to provide the Secretary and the Task Force with a comprehensive description of all programs, current or planned, that relate specifically to minority populations. This information was used by the Task Force in the recommendation development process to ensure that the suggested activities would provide new directions to existing departmental initiatives. The inventory also will be useful to organizations and individuals actively involved with minority health issues.

The inventory obtained information from the following agencies:

- Alcohol, Drug Abuse, and Mental Health Administration
- Centers for Disease Control
- Food and Drug Administration
- Health Care Financing Administration
- Health Resources and Services Administration
- National Institutes of Health
- Office of the Assistant Secretary for Health
- Office for Civil Rights
- Office of the Secretary
- Office of Human Development Services
- Social Security Administration.

The program descriptions were based on those data maintained in each agency's data management system; they varied greatly in the amount of detail provided. Although the inventory originally was intended to identify programs that focused on minority populations specifically, it was found that many programs benefitted all populations, including minorities. In some instances, it was possible to identify the extent of activities targeted to minorities; for others it was difficult to separate minority-specific components from the overall program. It is important to note that this compilation of DHHS programs and projects represents the first such grouping of departmental activities in the area of minority health.

Questionnaire Development

A four-page questionnaire was developed requesting program-level officers to indicate whether their programs addressed the following areas: cancer; cardiovascular and cerebrovascular disease; diabetes; arthritis and other musculoskeletal disorders; nutrition; disease and disorders of the eye; infectious diseases; digestive disorders; genetic disorders; infant mortality and maternal health; homicide, suicide and unintentional injuries; chemical dependency and related diseases; mental health and illness; occupational health; respiratory diseases; dental health; kidney disorders; or some other disorder.

Another series of questions requested descriptions of programs and how each program addressed minority health issues. The major classes of activity were: health service delivery, research and data collection, health professions' development, and health education/information dissemination.

Overall, the questionnaire attempted to gauge the extent of existing programs that addressed the minority health concerns.

Data Collection

Inventory questionnaires were distributed to the major components of DHHS: the Assistant Secretary for Health, the Assistant Secretary for Human Development Services, the Administrator for the Health Care Financing Administration, and the Commissioner of the Social Security Administration who, in turn, distributed them to their respective operating divisions. Instructions were provided that explained the purpose of the survey and the required information. Meetings were held with each agency contact to explain the nature of the Task Force and answer questions. More than 195 questionnaires were submitted by the agencies. Each questionnaire was reviewed for clarity and completeness by Task Force staff.

Data Analysis and Reporting

The program descriptions reflect the broad diversity of the programs administered by DHHS. Although some submissions focus on broad research issues that, by their very nature, included minority health issues, others focused on model demonstration programs that target specific minority groups. To preserve the richness of the descriptions, no attempt was made to combine the material into broader classifications.

Index of DHHS Programs

The index that follows lists either agencies or institutional components that have ongoing or planned minority-related initiatives. Complete descriptions of every program appear in another volume of this report. The office address and telephone number of each program are included in the later volume so that future users may readily obtain additional information.

ALCOHOL, DRUG ABUSE, AND MENTAL HEALTH ADMINISTRATION (ADAMHA)

National Institute of Alcohol Abuse and Alcoholism:
- Division of Biometry and Epidemiology
- Black and Hispanic Alcohol Problems: A National Study

National Institute on Drug Abuse:
- National Drug Abuse Media Campaign
- Ethnic Community Initiative
- NIDA Starter Award
- Minority Access to Research Centers
- Prevention of Drug Abuse Among Minority Populations
- Treatment of Drug Abuse Among Minority Populations
- Ethnic Minority Family Mobilization Project
- Estimating Mental Health Need

National Institute of Mental Health:
- Prevention Program
- Center for Studies of Mental Health of the Aging
- Center for Studies of Minority Group Mental Health
- Center for Studies of Antisocial and Violent Behavior
- Center for Prevention Research
- Center for Mental Health Studies of Emergencies
- Center for Epidemiologic Studies
- Mental Health Clinical Research Centers
- Research Scientist Development
- NIMH Minority Biomedical Research Support
- Clinical Research Branch
- Small Grant Program
- Psychosocial Treatments Research
- Child and Adolescent Service System Program (CAASP)
- Community Support Program
- National Research Service Award
- Mental Health Clinical Training
- National Reporting Program

CENTERS FOR DISEASE CONTROL (CDC)

- Investigations and Technical Assistance
- Injury Prevention
- Occupational Safety and Health - Training Grants
- Occupational Safety and Health - Research Grants
- Childhood Immunization Grants
- Health Programs for Refugees
- Venereal Disease Control Grants
- Venereal Disease Research, Demonstration, and Public Information and Education Grants
- Project Grants and Cooperative Agreements for Tuberculosis Control Programs
- Cooperative Agreements for State-Based Diabetes Control Programs

FOOD AND DRUG ADMINISTRATION (FDA)

- Food Safety
- Nutrition
- Task Force to Increase Interaction with Minority Health Professional Schools
- Office of Consumer Affairs Communications
- Consumer Affairs Education Program (Field Offices)

HEALTH CARE FINANCING ADMINISTRATION (HCFA)

- Medicare
- End-Stage Renal Disease Program
- Medicaid
- Research and Demonstration

HEALTH RESOURCES AND SERVICES ADMINISTRATION (HRSA)

- Indian Health Service
- Community Health Center Program
- Black Lung Clinics
- Migrant Health Program
- National Health Service Corps
- Home Health Services Program
- National Health Service Corps Scholarship Program
- Hansen's Disease Program
- Health Careers Opportunity Program
- Advanced Financial Distress
- Nursing Special Project Grants
- Professional Nurse Traineeship Grant Program
- Area Health Education Centers
- Health Professionals Analytical Studies and Reports
- Nurses Midwifery Office
- Contract Health Service

NATIONAL INSTITUTES OF HEALTH (NIH)

Division of Research Resources:
- Animal Resources Program
- Biomedical Research Support Program
- General Clinical Research Centers Program
- Biomedical Research Technology Program
- Minority Access to Research Careers Program (MARC)
- Minority Biomedical Research Support Program (MBRS)

National Cancer Institute:
- Epidemiology Research Program
- Chemical and Physical Carcinogenesis Research Program
- Biological Carcinogenesis Research Program
- Nutrition Research Program
- Tumor Biology Research Program

Immunology Research Program
Diagnostic Research Program
Preclinical Treatment Research Program
Clinical Treatment Research Program
Rehabilitation Research Program
Comprehensive Minority Biomedical Program
Resource Development Activities
Cancer Control Program

National Eye Institute:
Retinal and Choroidal Diseases Branch
Strabismus, Amblyopia, and Visual Processing
Intramural Research Program
Anterior Segment Diseases Branch

National Heart, Lung, and Blood Institute:
Heart and Vascular Diseases Program
Lung Diseases Program
Blood Diseases and Resources Program
Companion Issues

National Institute on Aging:
Behavioral Sciences Research
Systolic Hypertension in the Elderly
Public Information Office
Epidemiology, Demography, and Biometry Program
Gerontology Research Program

National Institute of Allergy and Infectious Diseases:
Microbiology and Infectious Diseases Program
Immunology, Allergic and Immunologic Diseases Program

National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases
Arthritis, Musculoskeletal, and Skin Diseases
Diabetes
Digestive Diseases and Nutrition
Kidney, Urologic, and Hematologic Diseases
Pima Indian Studies

National Institute of Child Health and Human Development:
Center for Research for Mothers and Children
Healthy Mothers, Healthy Babies Program
Center for Population Research
Intramural Program

National Institute of Dental Research:
Office of the Director
Extramural Programs

National Institute of General Medical Sciences:
- Pharmacological Sciences Program

National Institute on Neurological and Communicative Disorders and Stroke:
- Travel Fellowships for Minority Neuroscientists
- Survey of Major Neurological Disorders in Copiah County, Mississippi
- Chronic CNS Disease Studies: Slow, Latent, and Temperate Virus Infection
- Summer Research Followship Program

OFFICE OF THE ASSISTANT SECRETARY FOR HEALTH (OASH)

National Center for Health Statistics:
- National Hospital Discharge Survey
- National Health and Nutrition Examination Survey
- NHANES I Epidemiologic Follow-up Survey
- Hispanic Health and Nutrition Examination Survey
- National Medical Care Utilization and Expenditure Survey
- National Ambulatory Medical Care Survey
- National Nursing Home Survey
- National Master Facility Inventory
- Vital Statistics Follow-back Survey Program
- National Vital Statistics Program
- National Survey of Family Growth
- National Health Interview Survey

Office of Public Affairs:
- Healthy Mothers, Healthy Babies Coalition
- Information and Education on Acquired Immune Deficiency Syndrome

Office of Disease Prevention and Health Promotion:
- National Health Promotion Program
- National Health Information Clearinghouse
- 1990 Objectives for the Nation Initiative
- U.S. Task Force on Preventive Services

Office of Refugee Health:
- Refugee Preventive Health
- Cuban/Haitian Entrant Program
- Health Program for Refugees

Office of Population Affairs:
- Adolescent Family Life
- Office of Family Planning

OFFICE OF THE ASSISTANT SECRETARY FOR HUMAN DEVELOPMENT SERVICES (HDS)

- Administration for Native Americans
- Administration for Developmental Disabilities
- Administration for Children, Youth, and Families (Head Start)
- Coordinated Discretionary Funds Program
- Administration on Aging
  - Title III of the Older Americans Act (Part B - Nutrition Services)
  - Title VI, Older Americans Act, Grants to Indian Tribes for Supportive and Nutrition Services

OFFICE OF THE ASSISTANT SECRETARY FOR PLANNING AND EVALUATION (ASPE)

OFFICE FOR CIVIL RIGHTS, OFFICE OF THE SECRETARY (OCR)

SOCIAL SECURITY ADMINISTRATION (SSA)

- Health-Related Programs

SURVEY OF NON-FEDERAL ORGANIZATIONS

Introduction

The Task Force conducted a nationwide survey of approximately 300 individuals and organizations that represent health-specific professional, scientific, and service groups. The survey was intended to elicit information on ways the Department might improve the health status of minority Americans.

The survey asked four questions:

(1) From the perspective of your organization and the people you represent, what are the three most critical health disparities between minority and nonminority Americans?

(2) For the disparities you identified, what appear to be the most significant contributing factors?

(3) Highlighting specific examples known to your organization, what kinds of health programs in the minority community have been most successful? What has been the key element of that success?

(4) Within the confines of the current Department of Health and Human Services' (DHHS) programs and policies, how might DHHS better address the disparity in the health status of minority populations?

The following represents a summary of the 125 survey responses received by April, 1985.

Summary of Responses

The plight of many minority people in need of health care is captured in this excerpted comment:

> "Preventive care is often a luxury that time rarely affords minority people. One is inclined to ignore a cough, a lump in the breast, or even an advancing pregnancy when the demands of daily existence are overtaxing. These ceaseless demands for employment, housing, food, clothing, legal help, public assistance, etc., are sufficient to ensure that many illnesses or conditions reach a critical point before health care is sought."

Socioeconomic issues influencing health status were frequently cited as contributors to the disparity. These included: the prevalence of poverty among minority groups, low income, unemployment, lack of health insurance, and inability to pay deductibles or copayment costs of insurance. Another aspect mentioned frequently by respondents was the reduction in Government funding for health care services and programs for minorities.

Many respondents believe that the major health disparities could be reduced through improved access to health care services and programs. These need to be designed and operated to be culturally sensitive to the specific minority population being served. The types of services most often advocated by respondents were health education and disease prevention programs.

Suggestions for improving health care services and programs for minorities were:

- Continued support for existing successful health programs.
- Minority-specific research and data collection.
- Prevention and health education programs that incorporate bicultural/bilingual services.
- Minority participation in policy development.
- Education and training programs.
- Improved access to health care through modification of third-party payer systems.

Specific Issues

From the perspective of your organization and the people you represent, what are the three most critical health disparities between minority and nonminority Americans?

For the disparities you identified, what appear to be the most significant contributing factors?

The responses to the first two questions are reported together because of the linked nature of the majority of responses received. The most critical disparities identified by the respondents were in the areas of:

- Access to health care.
- Chronic diseases.
- Pregnancy and birth disorders.
- Availability of data.

Access to Health Care

Problems concerning minority access to health care cut across all responses. Some respondents cited access to health services as a primary disparity, while others identified access as a secondary issue or a contributing factor to the primary disparities. For example, chronic disease conditions were often mentioned as a disparity; however, access to proper health care was listed as a strong contributor to the prevalence of this disparity.

Two major areas of concern in health care access for minorities were:

- The lack of certain types and numbers of services and programs.
- Barriers to existing services.

In addition, the need for generally improved access, quality, and utilization of services such as primary care, screening, detection, treatment, follow-up, and public (health) education programs were frequently cited. Current health services' research and promotion were pinpointed as inappropriate or inadequate for identifying, communicating with, convening, and involving minorities through community-based groups, such as: schools, churches, Health Maintenance Organizations (HMOs), worksites, and voluntary health groups. In addition, the paucity of screening and health education programs was identified as a leading cause of delayed diagnosis and the poor prognosis for medical problems.

Specific problems of access to health care included:

- Lack of health care for mothers and children.
- Lack of access to services for early detection of diseases such as cancer, hypertension, and diabetes and other specialty health care.
- Inability of non-English speaking people to use freely the health care system because of language and cultural barriers.
- Less access to, and inappropriate use of, health services.
- Poor quality of health care.
- Underutilization of existing health resources because of a lack of knowledge and motivation.
- Lack of physicians in rural areas.

- Problems with health care facilities, including affordability, location, hours of operation, and transportation to and from the facilities.

The major theme of these responses pointed to a need for more health education programs tailored to the minority group being served, on the following issues: prenatal and infant care, proper nutrition and weight reduction, management of chronic illnesses, family planning and sex education, and alcohol and drug abuse counseling. Respondents often stressed the need for programs that emphasize preventing disease and promoting good health and good health practices.

Chronic Diseases

Hypertension (high blood pressure), cardiovascular disease, cerebrovascular disease, cancer, and diabetes were most often cited as specific diseases that contribute to the health disparity. Most respondents believed that, if adequate screening programs were available and utilized, more chronic diseases experienced by minorities could be detected early. Respondents also believed that effective patient education and follow-up programs would help to reduce illness and death.

Pregnancy and Birth Disorders

Pregnancy-related concerns such as infant mortality, low birthweight infants, and prenatal, perinatal, and postnatal care were cited by many respondents as major issues.

Access to proper health care was again cited. In the view of most respondents, early and adequate prenatal care and counseling is unavailable or underutilized among minority populations. Also, access to high technology techniques was seen as inadequate, creating a higher incidence of complications of pregnancy and birth.

Many factors that contribute to pregnancy and birth disorders were believed to be manageable with proper access to appropriate, adequate, and early care. Such care includes regular prenatal checkups, nutrition counseling, management of any chronic health problems, and postnatal care for infants and mothers. Access to family planning services was often mentioned as potentially helpful in reducing low birthweight and infant mortality.

Availability of Data

Inadequacy of data on minorities was cited as a major barrier to developing effective health care strategies and programs. The lack of data for Hispanics and Asian/Pacific Islanders was cited most often.

Other Disparities

Respondents noted a number of other areas of disparity:

- Homicide, suicide, and unintentional injuries; alcohol and drug abuse; and problems related to stress.
- Inadequate education.
- Poor nutrition.
- Underrepresentation of minorities in the health professions.
- Problems related to environment, such as housing and unsanitary living conditions.
- Discrimination, deterioration of the family structure, lack of support services and recreational facilities, and low self-esteem.

The quality of education that many minorities receive and their lower educational attainment have a substantial impact on their socioeconomic status, in the opinion of respondents. Educational deficits were believed to be caused by such factors as insufficient parental guidance, lack of encouragement to achieve, and lack of emphasis on education in general. Low educational attainment is seen as both a result and a cause of low socioeconomic status.

Poor nutrition was cited by respondents as affecting nearly every aspect of health, particularly in diseases such as diabetes and hypertension and in relation to pregnancy and birth.

Too few minorities in health care professions was mentioned as contributing to the cultural insensitivity that is said to exist in many health care facilities. Factors cited for underrepresentation include a lack of educational opportunity and financial and political resources for training of minorities in health care professions.

Environmental concerns expressed by respondents included inadequate housing, unsanitary and unsafe working and living conditions, exposure to hazardous chemicals and materials in the worksite and in homes, and the danger of lead poisoning in children.

Elements of Successful Programs

Highlighting specific examples known to your organization, what kinds of health programs in the minority community have been most successful? What has been the key element of that success?

Certain common elements seemed to contribute to the success of many health programs described by the respondents. These key elements include:

- Community involvement and outreach.

- Program focus on comprehensive services, including disease prevention and health promotion.

- Program ability to improve minority access to health services.

- Cultural sensitivity to the group being served.

Examples of health programs that have been successful in minority communities included: community outreach; hypertension control; maternal and child health care; family planning; health education, promotion, and prevention; bicultural and bilingual health care; and Medicare and Medicaid. In general, improved access to medical care was cited as a key element of a program's success; however, success was by no means limited to this element alone.

All groups representing Blacks, Hispanics, Native Americans, and Asian/Pacific Islanders addressed community-based health programs. They cited comprehensive health services, such as dental care, social services, public health education, outreach, and prevention programs, as essential components to community health programs. The key element of success for these programs was that they were accessible and affordable. Other elements of success for community health programs included cultural sensitivity, networking with other agencies in the community, and control of health programs by community boards.

Hypertension Detection and Follow-up Programs and maternal and child health care programs were regarded as successfully demonstrating these qualities.

All groups emphasized health education, promotion, and prevention programs as successes in minority communities, based on experience with planning and delivery of services.

All groups cited Medicare and Medicaid as successful programs. Respondents attributed success to improved accessibility and availability of quality health care to the socioeconomically deprived. Financial assistance and Government funding were also perceived as increasing opportunities for minority employment in the health care field; otherwise, such employment may not have been possible.

Suggestions for Action

Within the confines of the current Department of Health and Human Services programs and policies, how might DHHS better address the disparity in health status of minority populations?

Respondents proposed a variety of specific ways that DHHS might better address disparities in health status of minority populations, including the following:

- Continue to support or fund existing health programs that have been successful.
- Improve data collection and interpretation of data regarding specific minority groups.
- Direct resources to prevention activities for high-risk minority populations.
- Increase funding for health education programs and research on health disparities.
- Incorporate bicultural/bilingual services into health programs.
- Network with private medical and social communities.
- Develop public education programs and other programs encompassed by the <u>1990 Objectives for the Nation</u>.
- Increase minority participation in policy development, education, and training programs, thereby increasing equal opportunity for minorities.
- Increase accessibility to quality health care.
- Encourage third-party payers to include coverage for health promotion/disease prevention.

All groups recommended that DHHS target programs to populations and geographic areas with the highest rates of mortality and morbidity. They placed particular emphasis on the need to provide adequate funding for health education, prevention, and research for poor and minority populations and to support minority health programs within the community.

In addition, minority groups indicated that DHHS might address the health disparities of minority populations more effectively by making appropriate use of viable and successful community programs and institutions, including families, churches, schools, small businesses, and others.

All minorities who responded to the survey endorsed minority participation in policy development.

APPENDIX

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Laurence O. Watkins, M.D., M.P.H., Assistant Professor of Medicine, Section of Cardiology, Department of Medicine, Medical College of Georgia, Augusta, Georgia.

Tapping the Black Communities' Endemic Alcohol/Drug Abuse Prevention Resources

Mary Benjamin, Ph.D., Director, Interdisciplinary Alcohol/Drug Studies Center, Jackson State University, Jackson, Mississippi

Betty W. Fletcher, M.S.W., Associate Director, Research Training, Interdisciplinary Alcohol/Drug Studies Center, Jackson State University, Jackson, Mississippi

Excess and Deficit Mortality Due to Selected Causes of Death and Their Contribution to Differences in Life Expectancy of Spanish-Surnamed and other White Males--1970 and 1980

Benjamin S. Bradshaw, Ph.D., Associate Professor of Demography, University of Texas Health Science Center at Houston, School of Public Health, Houston, Texas

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Patterns and Problems of Drinking Among U.S. Hispanics

Raul Caetano, Ph.D., Scientist, Alcohol Research Group, Medical Research Institute of San Francisco, Berkeley, California

The Effective Approach and Managment of Diabetes in Black and other Minority Groups

John Davidson, M.D., Ph.D., Director, Diabetic Clinic, Grady Memorial Hospital, Atlanta, Georgia

Increased Prevalence of Diabetes Among Japanese Americans and the Role of Environmental Factors in Its Genesis

Wilfred Fujimoto, M.D., Professor, School of Medicine, Metabolism, Endocrinology, and Nutrition, Universiity of Washington, Seattle, Washington

Socioeconomic Position and Minority Health: A Summary of the Evidence

Mary Haan, M.P.H., Research Scientist, Berkeley, California

George Kaplan, Ph.D., Director of Human Population Laboratory, California Department of Health Services, Berkeley, California

Family Violence and Homicide in the Black Community--Are They Linked?

Robert L. Hampton, Ph.D., Associate Professor of Sociology, Connecticut College, New London, Connecticut

Longitudinal-Situational Approaches to Understanding Black-on-Black Homicide

Darnell Hawkins, Ph.D., J.D., Associate Professor of Sociology, University of North Carolina, Chapel Hill, North Carolina

Associations of Health Problems with Ethnic Groups as Reflected in Ambulatory Care Visits

M. Alfred Haynes, M.D., President/Dean, Charles R. Drew Postgraduate Medical School, Los Angeles, California

Differences in Socioeconomic Status and Acculturation Among Mexican Americans and Risk of Cardiovascular Disease

Helen P. Hazuda, Ph.D., Assistant Professor, University of Texas Health Science Center, San Antonio, Texas

Prevalence and Incidence of Ischemic Heart Disease in United States' Black and White Populations

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Research Needs: Prevention and Intervention Strategies

Leo Hendricks, Ph.D., Associate Professor and Director of Research, Institute of Urban Affairs and Research, Howard University, Washington, D.C.

Expression of Diabetes Mellitus in Black Americans: Genetic, Epidemiological, and Therapeutic Aspects

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Juanita A. Archer, M.D., Associate Professor of Medicine, Howard University, Washington, D.C.

A Review of Drinking Patterns and Alcohol Problems Among U.S. Blacks

Denise Herd, M.A., Scientist, Alcohol Research Group, Epidemiology and Behavioral Medicine, Medical Research Institute of San Francisco, Berkeley, California

Comprehensive Model to Detect, Assess, and Treat Effects of Assaultive Violence in Hospital Populations

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Stroke Report

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Nutritional Status and Dietary Patterns of Racial Minorities in the United States

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Ischemic Heart Disease Risk Factors in Black Americans

Ischemic Heart Disease Risk Factors in Hispanic Americans

Ischemic Heart Disease Risk Factors in American Indians and Alaska Natives

Ischemic Heart Disease Risk Factors in Asian/Pacific Islanders

Shiriki K. Kumanyika, Ph.D., M.P.H., Assistant Professor, Department of Epidemiology, Johns Hopkins University, School of Hygiene and Public Health, Baltimore, Maryland

Changes in the Criminal Homicide Rate of American Indians for the City of Los Angeles: 1970-79

The Relative Risks of Types of Homicide Among Anglo, Hispanic, Black, and Asian Victims in Los Angeles: 1970-79

Fred Loya, Ph.D., University of California, Los Angeles, The Neuropsychiatric Institute, Los Angeles, California

The Black Female Criminal Homicide Offender in the United States

Cora Mann, Ph.D., Associate Professor, School of Criminology, Florida State Univeristy, Tallahassee, Florida

Analyses Commissioned by The Task Force on Black and Minority Health: Excess Deaths 1979-81, Excess Deaths 1969-71, Health Interview Survey, Excess Deaths in Hispanic Populations, 1979-81, Person-Years of Life Lost, Life Expectancy by Cause of Death

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Violence, an Epidemic; A Possible Approach: Neighborhood-Based, Interdisciplinary, Comprehensive Health Care

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Evaluation of Interventions to Reduce Racial Disparities in Infant Mortality

Health Insurance Coverage of Perinatal Care for Minority Women

Review of Interventions to Reduce Racial Disparities in Infant Mortality

Case Studies of Selected Interventions: Limitations and Recommendations for Improving Infant Mortality Intervention Data for Minorities

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Coronary Heart Disease in Black Populations: Current Research, Treatment, and Prevention Needs

Hector F. Myers, Ph.D., Associate Professor of Psychology, University of Los Angeles, Scholar-In-Residence, Charles Drew Postgraduate Medical School, Los Angeles, California

Interdisciplinary Interventions Applicable to Prevention of Interpersonal Violence and Homicide in Black Youth

Deborah Prothrow-Stith, M.D., Assistant Professor of Medicine, Boston Univeristy, Boston City Hospital, Boston, Massachusetts

The Escalating Incidence of Homicide in the Nation's Black Communities--Can We Intervene?

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Analysis of Research Data on Trends and Differentials in Infant Mortality and Low Birthweight for Black, White, Hispanic, Asian, and American Indian Populations

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Survival of High-Risk Minority Infants in Los Angeles County

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Racial Variations in Self-Assessed Health and Socioeconomic Status in the 1976 Survey of Income and Education (SIE)

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Minority Dental Health Manpower and Trends

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Factors Relating to the Increased Prevalence of Diabetes in Hispanic Americans

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Interviewing Persons Hospitalized with Interpersonal Violence-Related Injuries: A Pilot Study

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Health Care Service Delivery in Asian American Communities

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Gang Homicide in Los Angeles

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Bibliography of Prematurity, Low Birthweight, and Infant Mortality

Analyses of Scientific Articles of Prematurity, Low Birthweight, and Infant Mortality

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Behavioral Weight Control for Obese Patients with Type II Diabetes

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Asian-White Mortality Differences: Are there Excess Deaths?

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Physical and Mental Health Status Indicators for Asian/Pacific Americans

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KEY TO ABBREVIATIONS

ADAMHA	Alcohol, Drug Abuse and Mental Health Administration
CDC	Centers for Disease Control
COSSMHO	National Coalition of Hispanic Mental Health and Human Services Organizations
DHHS	Department of Health and Human Services
FDA	Food and Drug Administration
HANES	Health and Nutrition Examination Survey
HCFA	Health Care Financing Administration
HRSA	Health Resources and Services Administration
IHS	Indian Health Service
LULAC	League of United Latin American Citizens
NAACP	National Association for the Advancement of Colored People
NCHS	National Center for Health Statistics
NCHSR	National Center for Health Services Research
NIH	National Institutes of Health
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NIDA	National Institute on Drug Abuse
NIMH	National Institute of Mental Health
OASH	Office of the Assistant Secretary for Health
ODPHP	Office of Disease Prevention and Health Promotion
OHDS	Office of Human Development Services
OMB	Executive Office of the President/Office of Management and Budget
OS	Office of the Secretary
PHS	Public Health Service
SSA	Social Security Administration

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