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EXECUTIVE SUMMARY

Name: LTC Silas C. Smalls

<u>Title</u>: MOBILIZING BLACK AMERICA: Black Health Problems and Solutions

Synopsis: One of the pillars of our national security strategy is reconstitution. If the United States is to reconstitute its forces for a future conflict, it will be necessary to be able to mobilize all segments of the society. African Americans suffer from many serious physical and socioeconomic problems that could prevent the United States from achieving as much from them as from other segments of the population. Poor health is one of the major problems that could limit the contributions of blacks to any full-scale reconstitution effort. What can be done about it? What, if anything, ought to be the role of the Department of Defense in solving the problem? This paper examines some of the leading causes of deaths of African Americans in the United States. It also examines ways to prevent and control serious health and social problems. Chronic diseases and major social health problems have already deprived many African Americans of quality of life and longevity.



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INTRODUCTION

The post-Cold War international security environment provides many residual benefits (peace dividend) for Americans. Our national security decisionmakers now have a unique opportunity to rebuild the economy, reduce the budget deficit, and address major domestic issues. President Clinton and Congress must find ways to allocate scarce and declining national resources between domestic programs and defense.

If the United States is to reconstitute its forces for a future conflict, it will be necessary to be able to mobilize all segments of the society. African-Americans suffer from many serious physical and socioeconomic problems that could prevent the United States from achieving as much from blacks as from other segments of the population.

Poor health is one of the major problems that could limit the contributions of blacks to any full-scale reconstitution or mobilization effort. Because blacks suffer from poor health and other social problems more than any other ethnic group in America, fewer will be able to qualify for military or federal service during mobilization. The challenge facing black leaders and U.S. decisionmakers is to find ways (solutions) to improve the overall health care and quality of life of African-Americans.

OVERVIEW OF BLACK HEALTH AND SOCIAL PROBLEMS

Many social problems and serious long-term health illnesses seem to plague African-Americans more than any other ethnic group in the United States. In fact, over the last fifteen years, the overall socioeconomic posture of blacks has declined significantly.

Lack of economic prosperity seems to be the underlying cause of black health care problems. About thirty percent of the black population in the Fnited States lives in poverty. (1) And to make matters worse, more than forty percent of the black children in America live in households headed by black women who live in poverty. (2) Single female heads of households seem to be the norm for black families in the United States. Why? Because a large number of African-American males are either incarcerated or homeless and/or unemployed. As a result, black women have become the mainstay of black America. Without the strong will and determination of black women, things would be even worse for African-Americans.

Poverty stricken blacks seldom qualify for health insurance coverage, therefore when illness strikes, they receive less than adequate or no medical treatment. Black unhealthy life-styles and heavy "soul" food diet are also major causes of health problems.

Considering all of the major health and social problems that

afflict blacks, one can become almost paranoid. Blacks seem to suffer from more diseases and more social ills than any other race of people on earth.

The effect of serious health and social problems has been catastrophic:

Infant-Mortality. At almost 18 deaths per 1000, the infantmortality rate for blacks is more than twice the rate for whites. It is actually higher than the infant-mortality rate for Malaysia (a third world country). (3)

Acquired Immune Deficiency Syndrome (AIDS). AIDS is exacting a heavy toll on African-Americans. Blacks comprise almost 30 percent of the U.S. population infected with the AIDS virus. Black women are especially hard hit with this dreadful disease, comprising 52 percent of all women infected, and about 53 percent of all children with the disease are black. (4)

Homicides. Blacks continue to kill blacks at an enormously high rate. For black males between the ages of 15 and 34, homicide is the leading cause of death. "Nearly half of all U.S. murder victims are black males." (5)

Longevity. Black children in the United States are three times as likely to be murdered between the ages of five and nine compared to white children. (6) And according to the latest mortality studies, "the average life expectancy of

African-Americans is 70.3 years, much less the 76 years that white Americans can expect. In fact, a man living in Bangladesh has a better chance of reaching age 65 than a man living in Harlem." (7)

Heart Disease is the leading cause of death of African-Americans. It kills blacks at almost twice the rate it kills whites. (8)

Hypertension. According to the American Heart Association (AHA), about 40 percent of black adults suffer from high blood pressure. Hypertension afflicts blacks twice as much as whites, and even some black children are now being treated for this disease. (9) Hypertension is the primary risk factor associated with heart disease in blacks.

Stroke. Studies show that "deaths from stroke is five times as common in African-Americans of both sexes between the ages 35 and 55. And, advanced kidney disease is 15 to 20 times as common." (10)

Cancer. The National Black Women's Health Project indicates that "while proportionately fewer black women than white suffer from breast cancer, more black women are likely to die from it. Furthermore, as cervical cancer rates have decreased among white women, they have risen among black women." (11)

Diabetes and lung cancer are also killing blacks at higher rates than whites.

Because of some of these health and social problems and lack of adequate health insurance coverage, many blacks are forced to live a "third world life" in the most industrialized country in the world. When one compares the quality of life indicators of some Sub-Saharan African countries to that of African-Americans, one finds that the standard of living for some Africans in some of these countries is actually higher than for many poor blacks in the United States.

These serious health and social problems are holding many African Americans hostage to socioeconomic depravity.

A recent report issued by the Department of Health and Human Services revealed that blacks account for nearly 60,000 "excess deaths" annually. These deaths would not have occurred if the black victims had access to continuous and long-term preventive health care. Heart disease, stroke, cancer, diabetes, and infant mortality are the major causes of "excess deaths" among blacks. Cancer of the liver and pneumonia accounted for nearly half the excess deaths of black men under 45. Infant mortality, heart disease, and murder accounted for most of the excess deaths of black women of the same age group. The resurgence of tuberculosis and other chronic diseases have also contributed to higher death rates in inner cities. (12)

The next section of this paper will examine the leading causes of excess driths of African-Americans in the United States. It will also examine the impact of AIDS and infant mortality on the black population. These chronic diseases and serious social health problems have already deprived many African Americans of quality of life and longevity. To ensure the continuous contributions of blacks to the national security of the United States, federal and state governments must work with the black community to find ways to prevent and control these diseases and problems. Hence, the final portion of this paper will examine ways to improve the overall health and quality of life of African-Americans.

MAJOR HEALTH PROBLEMS

Heart disease, cancer, diabetes, and stroke. Among the ten leading causes of death in the United States, these four diseases kill blacks at almost twice the rate as whites. Hypertension, high blood cholesterol, obesity, unhealthy diets, and smoking are the leading causes (major risk factors) of these killers. The underlying problems associated with these diseases and their risk factors are: lack of health insurance coverage, unhealthy lifestyles, lack of primary health care, limited access to quality health care facilities, poverty, lack of education, and urban stress. There's a general perception in the black community that bigoted

attitudes of some white health care professionals also contribute to inadequate medical treatment that many blacks receive for these chronic diseases.

For example, a recent study revealed that "older whites are 3½ times more likely than older blacks to receive potentially lifesaving surgery to bypass a blocked coronary artery. The study, based on more than 86,000 coronary artery bypass graft surgeries performed under the medicare program, found that the gap was widest in Southeastern states, where whites were more than six times as likely to have the operation as blacks. It also found that the procedure was five times more prevalent among white men than among black men." (13) Whites are also more likely to receive early quality medical care and treatment for cancer, diabetes, and strokes as well.

Kidney disease. Blacks have the greatest number of kidney failures, but receive fewer kidney transplants than whites. Blacks with high blood pressure develop kidney disease 17 times more than whites, and blacks are less likely than whites to donate their organs or the organs of loved ones. As a result, there is a shortage of kidneys donated by blacks for blacks suffering from kidney disease. "The shortage of black kidney donors has a major impact on the care of blacks with kidney disease, since people of the same race are more likely to match a donated kidney with a recipient." (14) The good news is that

potential black donors have more than tripled over the last five years. (15)

Black Infant-Mortality. African-Americans have a higher infant-mortality rate than any other ethnic group in America. The black infant-mortality rate in the United States is actually higher than those found in some less developed countries. Brookings senior fellow Joshua M. Wiener and management consultant Jeannie Engel point out that,

Infant mortality rates in the United States are far higher than in many other industrialized nations, and infant death rates for blacks are twice those for whites. One serious impediment to reducing infant mortality and improving maternal and child health in the United States is that many children and pregnant women do not have access to basic health services. (16)

Many black women are single and live in poverty. As a result, many cannot afford health insurance coverage and do not receive adequate medical care during pregnancy. Lack of quality prenatal care reduces a woman's chances of giving birth to a normal and healthy baby. Poor diets, cigarette smoking, and drug use among black women also contribute to black infant-mortality. Women who smoke cigarettes and consume unhealthy foods during pregnancy have a greater risk of giving birth to premature or low-birthweight babies. The high rate of teen pregnancy and the prevalence of AIDS also exacerbate the problem.

Overall, black women, regardless of income and education, experience a high incidence of low-birthweight infants. A

recent study revealed that black women of the same age, income, and education gave birth to twice as many low-birthweight infants as white women in the same social category. Cigarette smoking, more than any other social or health risk factor, accounted for the highest number of low-birthweight babies. The study also found that women who reported smoking 15 or more cigarettes a day during pregnancy "had an incidence of low-birthweight more than twice that of black mothers who said they did not smoke during pregnancy; among whites, the differential was a factor of almost four." (17)

The AIDS Epidemic. AIDS/HIV is sweeping across America's inner-cities. It is taking an unrelentingly devastating toll on a black population already beseiged by other serious health and social problems. Young African-Americans in our inner cities are at great risk of being infected with the AIDS virus. Sharing dirty needles is the leading cause of infections among black men.

Black women have a greater risk of contracting AIDS/HIV than any other segment of society. In the United States, black women account for more than 50 percent of women in America with AIDS. Similarly, in Sub-Saharan Africa, black women account for half of the adult population with AIDS. The World Health Organization estimates that the AIDS infection rates in some of the large U.S cities (black communities) are as high as some of the hardest hit areas in Sub-Saharan Africa.

There seems to be an "I don't give a damn because it can't happen to me" attitude among many young African-Americans concerning drug use and unsafe sex. This attitude is even found among young, well-educated middle-class blacks. Not to infer that AIDS is a poor man's disease. Because AIDS has also taken a heavy toll on the black middle-class as well as the poor. Poor single black women are easy targets for AIDS because many are uneducated, vulnerable, and extremely naive about drugs, money, and sex.

Robert Bazell points out that, "AIDS is devastating ghetto areas because the virus established itself there through massive sharing of contaminated syringes and needles by intravenous drug users. Infected male drug users have since been infecting women through sex, giving rise to the current heterosexual epidemic." (18)

If the AIDS virus continues to spread in the black community at the current rate, by the turn of the century, a greater number of African American children will also be infected. "A recent study of children aged 13 to 19 in Washington, D.C., found that 1.5 percent were infected with HIV, with infections divided equally between boys and girls." (19)

Until researchers find a vaccine for the AIDS virus, prevention (via education) is the only way to stop the spread of AIDS in the black community.

PRESCRIPTION FOR THE FUTURE

Why Do Blacks Have Poor Health? Many factors contribute to the poor health of African Americans. Poverty, high health care costs, inadequate health education, unhealthy lifestyles, and apathy are primarily responsible for the black health care crisis. Unhealthy lifestyles and high risk social behavior are probably the most difficult factors to change. As the late Arthur Ashe said at the June 12, 1992 African-American Health Conference sponsored by the Joint Center for Political and Economic Studies, "if we are going to accomplish what we set out to do [educating the black community on health issues], we are talking about a wholesale change in mind-set and the cultural norms of African-Americans." (20)

Studies show that many of the ten leading causes of death in the United States could be reduced through health lifestyle changes. The key to preventing coronary heart disease, hypertension, stroke, some cancers, diabetes, and obesity is to eat foods that are low in saturated-fat and sodium. Blacks consume too much fatty and salty foods--primarily "soul food." Which is extremely high in fat and salt. Fast food franchises such as Kentucky Fried Chicken and Popeyes, with their greasy and salty fried chicken delights, cater to blacks--soul food taste buds. Many blacks don't realize that these great tasting soul food cuisines (barbequed spare ribs, fried chicken, etc) are killing them.

Because blacks consume too much fatty and salty foods, they are the most obese ethnic group in America. Too many black children are overweight because black adults feed them a steady diet of fatty and salty foods. Recent studies reveal that, "almost half of black women and one-third of black men are severely overweight, vs one-fourth of white men and women."

This unhealthy diet also causes high blood pressure, high blood cholesterol, cancer, and contributes to diabetes. About 40 percent of black adults suffer from high blood pressure, Some 9 and 10 year old black kids in inner-cities are taking medication for high blood pressure. Unhealthy diets and urban stress appear to be the leading causes of hypertension in black children.

On a whole, African-Americans are the most physically unfit and inactive ethnic group in America, consuming too many unhealthy foods. Blacks are too overweight and exercise less than other ethnic groups. Blacks also smoke and abuse alcohol and drugs more than any other ethnic group in America.

Dr. Louis Sullivan, former Secretary of Health and Human Services believes that blacks can reduce the risk of premature death from chronic diseases simply by adopting healthy life styles. He contends that healthier lifestyles could eliminate an average of 40 percent of deaths from cardiovascular disease, cancer and diabetes complications. (22)

Getting blacks to change their lifestyles and eating habits will be a major undertaking. To improve the mobilization potential of black America, the Department of Defense should/ could educate the black community on the benefits of good health and healthy lifestyles. Because of limited access to health care facilities, inadequate health insurance coverage, and a declining federal budget, black leaders must develop and implement health education and prevention programs throughout black communities.

WAYS TO PREVENT AND REDUCE BLACK HEALTH PROBLEMS

Provide nation-wide access to health care. It is in the best interest of federal and state governments to help African Americans find ways to prevent and reduce major health and social problems that afflict the black population. The United States leads the world in sophisticated medical technology, medical expertise, and has numerous and diverse health care delivery systems. Yet, despite these strengths and efficiencies in health care, approximately 35 million Americans, "nearly 16 percent of the population under age 65," do not have private or public health insurance. The majority of uninsured Americans are blacks and hispanics. Twenty-three percent of black Americans have no health insurance. (23)

Access to quality medical care is directly related to having adequate health insurance coverage. Without health insurance, many people (especially blacks) will not seek preventive medical care and treatment; thereby increasing the risk to their overall health status. DOD in the interest of mobilization must solicit legislation that will ensure access to health care for all Americans, regardless of income.

Provide guaranteed access to comprehensive prenatal care. To reduce black infant-mortality, government and private industry must provide guaranteed access to comprehensive prenatal and primary health care services for pregnant women and teens. The dollars spent to ensure access to prenatal care for all women will reduce the amount of dollars that American taxpayers will have to spend in the future on long-term postnatal care for low-weight and unhealthy infants and dealing with other handicaps. Early access to comprehensive prenatal care ensures that expectant mothers are educated on proper nutrition, baby care, parenting skills, dangers of drugs, tobacco, and alcohol, and healthy behavior.

Early and regular comprehensive prenatal care is the best way to ensure healthy babies and avoid the preventable causes of infant mortality and birth defects. (24) A recent study found, that in 1990, the long-term medical costs of caring for all low-birthweight newborns totalled more than \$2 billion, about \$21,000 per low-birthweight infant compared to \$2842 per child

for a normal delivery. Low-birthweight infants account for almost 60 percent of the costs incurred for all newborns. (25)

During the early 1980s, the Reagan administration greatly reduced federal funding for health care programs that benefitted poor pregnant women and infants. As a result, many states implemented their own prenatal care programs. For example, "Healthy Baby" programs in California, South Carolina, Mississippi, and Washington provide comprehensive prenatal care for low-income pregnant women (principally blacks and hispanics).

North Carolina's "Baby Love" program is one of the most successful prenatal care programs in the United States. Since its inception in 1987, Baby Love has reduced the state's infant mortality rate from 12.6 per 1000 births in 1988 to 10.6 per 1000 in 1990. During the first two years of operation, Baby Love saved Medicaid more that \$2 million. The program has been instrumental in providing comprehensive prenatal care for poor black women in North Carolina. (26)

Provide comprehensive health education in public schools,

grades K-12. In a report to the National Health Education Consortium, May 1991, Ramon C. Cortines, Superintendent of Schools, San Francisco, CA points out that health education in public schools in the United States is either nonexistent or seriously inadequate. He also points out that "about 5% of the nation's public schools provide a comprehensive K-12

program of health instruction." (27) On average, students receive approximately 13.8 hours of health instruction per year. Mr. Cortines contends that if the United States provided comprehensive health instruction in all preschools and K-12 systems for a generation, it could "substantially change the health behavior of the nation." (28) Mr. Cortine's report provides evidence that school health education programs can change health behavior. (29)

A 1986 School Health Education Study of fourth through seventh grade students revealed significant changes (positive) in their health behavior after 30 hours of health instruction. (29) Findings of a 1988 study conducted by the Metropolitan Life Insurance Foundation showed that the proportion of students who smoked cigarettes, drank alcohol, and used drugs decreased almost 50% after three years of health instruction. (30)

Other success stories that support health education in public schools include a Rand study that revealed a significant decrease in smoking and other drug use after 18 weeks of instruction. A health education program in South Carolina to reduce unintended teen pregnancies resulted in a significant decrease in pregnancy rate for students who received health instruction. (31)

To begin to improve the overall health and quality of life of African Americans, black leaders and educators must find ways

to incorporate a comprehensive health education program in predominantly black public schools. Black teachers and health professionals must take the lead in teaching black students about the importance of good health and nutrition, and dangers associated with unhealthy lifestyles and risky behavior (AIDS and drugs). To prevent serious and long-term health problems and reduce social behavior risk factors, black children must be exposed to continuous and comprehensive health education and physical fitness training throughout their school years (K-12). A recent survey conducted by Louis Harris and Associates found "that students exposed to continuous and comprehensive health education smoked and drank less frequently and were less likely to have ridden in a car in which the driver had been drinking, and were less likely to consume drugs." (32)

Black leaders and educators must encourage federal, state, and local government officials to implement a national policy that supports an aggressive comprehensive health education program in public schools. Such a program would be very beneficial for inner-city schools which are predominantly black. Black children must be taught from an early age to practice healthy living and avoid social behavior risk factors. A comprehensive health education program in inner city schools would certainly begin to improve the overall health and quality of life of black children.

Promote health education and wellness in black communities and in the workplace. Black leaders must continue to press Congress for federal funds to support preventive health care programs in black communities. During the 1970s, many hypertension control programs (heart disease prevention) were instrumental in reducing black deaths from heart disease and improving black life expectancy. However, since the Reagan administration reduced federal funds for many of these programs, there has been an increase in "excess deaths" among blacks, thereby widening the black/white life expectancy gap. (33)

Many black communities across the nation have implemented health education and wellness programs to promote healthful living for African Americans. Good health begins at home. Therefore, the challenge is to educate black adults on the importance of good health, and ways to prevent and reduce serious illnesses. Many poverty stricken families are concerned with living one day at a time. To convince them to eat healthy foods and avoid risky behavior is a major challenge. As Dr. H. Mitchell Perry of Washington University points out, "preaching about health care seem laughable in crime-ridden inner cities" because many young blacks are primarily concerned with surviving from day to day. (34) It's a "live for today" mentality. How do you change this mindset? It's probably too late for many young blacks who are already involved in a life of drugs and crime. And that's why it's so important for the black community to

take action now to educate the next generation of black adults. Black children must be exposed to health education and healthy lifestyles during the early childhood years.

Black leaders are beginning to target public and private institutions (churches, colleges, schools) as the primary focus for prevention and intervention. For example, the Shiloh and True Vine Baptist Churches in Westwego, Louisiana are two of the growing number of successful church-based high blood pressure programs around the country. With the help of health care volunteers, they run their own high blood pressure screening, treatment, and follow-up program. (35)

The Community Health Advocacy Program (CHAP) in eastern North Carolina is another successful health program where community leaders are promoting health education and care for the disadvantaged. CHAP trains community care givers in health care and services (first aid, CPR, nutrition, child health). After training, these care givers return to their communities and establish health programs to promote health education and care. (36) Many blacks in eastern North Carolina have benefitted from CHAP. CHAP is an outstanding program that should be implemented in all black communities, especially in the inner-cities.

Emory University and Atlanta's Grady Memorial Hospital have made great strides in promoting black health care in Atlanta.

About three years ago, they initiated a Community Health Assessment and Promotion Project (CHAPP) that targetted over 400 black women with hypertension and obesity. After 10 weeks of training and education (aerobics, proper nutrition, etc), there was a significant reduction in weight and blood pressure. Grady Hospital has also been successful in treating and controlling diabetes in blacks. Dr. John K. Davidson, former director of the hospital's Diabetes Detection and Control Center, asserts that obesity is the major cause of diabetes in black women - a higher rate than the general population. He initiated a prevention-oriented diabetes program that targeted obese black women. Participants receive training and education in proper nutrition, weight control, and physical fitness. This program has been successful for more than 20 years. (37)

Since 1979, the Memphis High Blood Pressure Coalition (MHBPC) has been very successful in improving the health of blacks in Memphis and Shelby county, Tennessee. Prior to the establishment of MHBPC, strokes killed 125 of every 100,000 residents of Memphis and Shelby county - particularly blacks. Since MHBPC's inception, the incidence of stroke in the area is now 60 per 100,000, killing 400 fewer blacks each year. MHBPC is a coalition of local health professionals and local and national organizations and industries whose mission is to educate the community about healthy lifestyles, identify and monitor people with high blood pressure, and provide treatment. Because high

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blood pressure is more common in blacks, MHBPC focuses primarily on the black community. It also conducts blood pressure screenings at worksites where low-income industrial workers (primarily blacks) are employed. MHBPC has been very successful in promoting the health of blacks in Memphis and Shelby county. (38) It's another excellent community health coalition model that could be implemented in black communities. It's relatively inexpensive to run and pays tremendous dividends in the long run by reducing health care costs (insurance premiums, preventing strokes and heart attacks).

The primary goal of community health coalitions is to prevent diseases or identify and treat illnesses in the early stages to prevent and reduce the occurrence of chronic health problems. Successful health coalitions result in healthier citizens, more productive communities, and lower medical care costs. (39) By promoting health education and wellness in black communities, federal/state government and private industry can reduce the long-term medical costs associated with treating chronic diseases that afflict blacks.

Use youth and community organizations to promote adolescent health and prevent risky behaviors. There are more than 400 national youth and community organizations that serve millions of adolescents each year. These organizations (Boys and Girls clubs) provide training and education on drug abuse, sexuality, risky behaviors, and AIDS prevention. These organizations are

more prevalent in white communities. Black parents and community leaders must use local facilities (gyms, schools, and churches) to sponsor youth activities and health education and training for inner city black adolescents. (40)

Federal and state officials must also provide more funds to establish more school-linked health centers in the inner cities. Currently, there are over 300 school-linked health centers serving less than 1% of the adolescent population in the United States. These centers provide health services for adolescents who do not have health insurance or access to quality medical care. Blacks and hispanics comprise the majority of adolescents without medical coverage. Hechinger best summarizes the importance of youth organizations and school-linked health centers in promoting adolescent health.

Good health is infinitely less costly than disease. The price to society and its taxpayers of the damage done by drugs, alcohol, and tobacco runs into the hundreds of billions of dollars. Preventive action, such as efforts to reduce unlawful behavior caused by substance abuse and weapons-related violence, promise large savings in money and, more importantly, in human suffering. (41)

Increase black representation in the health profession. Black leaders and educators must encourage gifted black college-bound students to pursue careers in the health profession (doctors, nurses, dentists). In the past, adequate federal funds were available to ensure that gifted blacks were given the opportunity to pursue careers in health. Unfortunately, cutbacks in

federal funds during the early Reagan years reduced black enrollment in medical schools. From 1984 to 1991, the number of black doctors declined almost fifty percent from twentysix thousand to sixteen thousand. (42) More federal and state funds must be made available to support medical scholarships and grants for gifted black students. By increasing the number of black doctors and nurses in black communities, many blacks will be encouraged to make periodic visits to local community health centers for preventive care.

Increase enrollment of head start and elementary school children in the Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) program. EPSDT has been instrumental in improving the health of poor children enrolled in the program. Black educators and community leaders must take aggressive measures to increase the enrollment of poor black children in the EPSDT program. Studies from states that have an EPSDT program found that children's health status improved over time and participation reduced long-term health care costs. (43)

Black parents, teachers, and local officials must also ensure that all black children are fully immunized before they begin kindergarten. The Centers for Disease Control (CDC) report that immunization rates among minorities have decreased over the last decade -- "80 percent of Black, Latino and Native American children have not been adequately vaccinated." (44)

Federal and state government must continue to provide funds to support the special supplemental food program and the child nutrition program for women, infants, and children. WIC provides food vouchers to pregnant women, infants and children through age 4 considered to be at nutritional risk. The child nutrition program provides meals for needy children in school. Black community leaders and parents must ensure that all needy women, infants, and children are enrolled in these special supplemental food programs.

WHAT SHOULD THE DEPARTMENT OF DEFENSE DO?

The Department of Defense can use some of its vast resources to improve the mobilization potential of black America. Here are some things that DOD can do to help improve the health and quality of life of African Americans.

Conduct periodic health fairs/assessments in predominantly black communities. Throughout the United States, there are many military installations that are located near large inner cities. DOD decisionmakers should encourage local commanders and medical personnel to use their medical resources to conduct periodic health fairs in local communities. Military medical personnel can also assist community health organizations in developing and implementing other health prevention and intervention programs.

Provide medical scholarships for blacks. DOD should provide annual medical scholarships to train/educate black health care providers (doctors, dentists, nurses). After graduation from medical school/training, these health care providers would be required to serve (5 years) in inner-city health clinics and provide health care services for the poor. This approach would certainly help to increase the number of black health care providers in the inner-cities as well as improve the quality of health care for poor minorities.

Encourage private health care providers to volunteer. DOD should press Congress to pass tax incentive legislation that would encourage private health care providers to volunteer their services in inner city health care facilities. For example, Congress could pass legislation to exempt 50 percent of annual wages from federal and state taxes for doctors and nurses who volunteer their services for at least ten hours a week in an inner-city health care facility.

Develop adolescent health care centers. DOD should provide start-up funds to establish inner-city adolescent health centers for minorities. These centers could be staffed by health care providers (paid and volunteer) who are trained and willing to devote time and energy to counsel and mentor inner-city adolescents. For poor adolescents without health insurance or access to health care, these centers would certaintly improve health and promote healthy behavior.

Reserve Component Resources. DOD should require reserve component units/personnel to serve in inner city health clinics during monthly and annual training periods. These units and personnel could provide free preventive medical check-ups and health assessments for poor inner city dwellers. They could also provide immunizations for poor inner city children, conduct health education classes (AIDS, prenatal care, etc), and treat minor illnesses.

CONCLUSION

Trends. If business and government leaders fail to implement cost effective health care reforms, health care costs will continue to escalate. The cost of Medicaid and Medicare already exceed \$400 billion annually, and unless something is done in the near-term, will continue to rise. The primary factors that will continue to increase health care costs are; an aging U.S. population, heavy reliance on technology, high malpractice insurance premiums, and caring for seriously ill and terminal patients. Without reforms to reduce health care costs, an increasing number of Americans will join the uninsured ranks. This will include many full time middle-class workers as well as the poor and unemployed. (45) As a result, an even greater number of blacks will not be able to afford health insurance.

Black health and social problems have the potential to

jeopardize the future economic and national security interests of the United States. Because of these problems, many blacks will be unfit for military duty or unable to contribute in manufacturing jobs during a national emergency.

Outlook. As we approach the 21st century, the long-term prospects for quality health care for African Americans appear grim. However, there's still hope. The black community must take some critical steps to improve black health care. To do so, black leaders must pursue the following proposals for health care reforms.

- -Provide access to health care for all Americans, regardless of income or social status.
- -Ensure guaranteed access to comprehensive prenatal care for low-income women and teens.
- -Provide comprehensive health education and physical fitness training in predominantly black schools, K-12.
- -Promote health education and wellness in black communities and in the workplace.
- -Increase black representation in the health profession; seek additional federal funds to increase black enrollment in medical schools.
- -Ensure early and periodic screening, diagnosis, treatment (EPSDT) and immunization for all needy children.
- -Eliminate tobacco and alcohol advertising in black communities.

It's naive to think that health care reforms will do much to improve the health of poor African Americans. If poor blacks cannot afford health insurance now, it's doubtful that they will be able to afford it when it cost less. As long as 30% of African Americans continue to live in poverty, there will be little or no improvement in black health. Since poverty will continue to be a major obstacle to improving black health, education seems to be the only viable solution at this point. Black leaders and health educators must continue to initiate aggressive health education/prevention campaigns and programs to educate African Americans on the benefits of good health and healthy living.

ENDNOTES

1. Garwood, Alfred N. (1992). <u>Black Americans: A Statistical</u> Sourcebook, p. 285.

2. Morganthau et al, (1992, April 6). "Losing Ground." <u>Newsweek</u>, p. 32.

3. <u>Ibid</u>, p. 32.

4. <u>Ibid</u>, p. 32.

5. Ibid, p. 32.

6. Edelman, Marian W. (1990). "The Black Family in America." The Black Women's Health Book, p. 129.

7. Gorman, Christine, (1991, Sep 16). "Why Do Blacks Die Young?" <u>Time</u>, p.52.

8. <u>Ibid</u>, p. 50.

9. Sherrod, Pamela, (1990). "Controlling Hypertension." The Black Women's Health Book, p. 152.

10. Gorman, Christine, (1991, Sep 16). "Why Do Blacks Die Young?" <u>Time</u>, p. 50.

11. Davis, Angela Y. (1990). "Sick and Tired of Being Sick and Tired: The Politics of Black Women's Health." <u>The Black</u> <u>Women's Health Book</u>, p. 21.

12. Whitman, Steve and Legion, Vicki (1991, Feb 20). "Black Health In Critical Condition." <u>GUARDIAN</u>, p. 6.

13. Scott, Janny, (1992, Mar 18). "Heart Surgery: Whites More Likely Than Blacks To Undergo Bypass." Los Angeles Times, p. 8.

14. Reddick, Tracie, (1991, Oct 25). "Blacks Spurred on Organ Donations." <u>The Washington Times</u>, p. B-3.

15. <u>Ibid</u>, p. B-3.

16. Weiner, Joshua M. and Engel, Jeannie, (1991). "Improving Access to Health Services for Children and Pregnant Women." Brookings Dialogues on Public Policy, prelude.

17. Eberstadt, Nicholas, (Sep/Oct 1991). "Why Are So Many Babies Dying?" The American Enterprise, p. 40. 18. Bazell, Robert, (1991, Dec 2). "Long Shot." The New Republic, p. 16. 19. Ibid, p. 16. 20. King, Allison J. (Sep 92). "Making Health Care Work for Blacks." FOCUS, Vol. 20, No. 9, p. 5. 21. Gorman, Christine, (1991, Sep 16). "Why Do Blacks Die Young?" Time, p. 52. 22. Ibid, p. 52. 23. Seidman, Bert, (1991). "Access to Care." Curing U.S. Health Care Ills, p. 27. 24. National Commission to Prevent Infant Mortality (1992), Troubling Trends Persist: Shortchanging America's Next Generation, p. 28. Cooper, Mary H. (1992, Jul 31). "Infant Mortality." 25. The Congressional Quarterly Researcher, Vol. 2, No. 28, p. 643. 26. Ibid, p. 655. 27. Cortines, Ramon C. (1991, May). "A Practitioner's Perspective on the Interrelationship of the Health and Education of Children." National Health/Education Consortium, p. 4. 28. Ibid, p. 4. 29. Ibid, p. 5. 30. Ibid, p. 5. 31. Ibid, p. 5. "Health: You've Got To Be Carefully Taught." The 32. Wellness Newsletter, Jul/Aug 1989, Vol 10, No. 2. p. 4. 33. Whitman, Steve and Legion, Vicki (1991, Feb 20). "Black Health In Critical Condition." GUARDIAN, p. 6. 34. Gorman, Christine, (1991, Sep 16). Why Do Blacks Die Young?" Time, p. 51.

35. "Churches Reach Blacks With High Blood Pressure Message." The Wellness Newsletter, May/June 1990, Vol. 11, No. 3, p. 2.

36. Vail-Smith, Karen (Spring 1988). "Rural Community Leaders Learn to Provide Health Education." <u>Health Aims</u>, pp. 15-16.

37. Trenk, Barbara S., (Spring 1988). "Teaming Up Against Diabetes." Health Aims, pp. 41-43.

38. Feit-Hale, Carol, (Spring 1988). "Down With High Blood Pressure." <u>Health Aims</u>, pp. 45-46.

39. Seidman, Bert (1991). "Community Coalitions." <u>Curing</u> U.S. Health Care Ills, p. 24.

40. Hechinger, Fred M., (1992). "Roles for Youth Organizations." <u>Fateful Choices</u>, pp. 14-15.

41. Ibid, p. 25.

42. Gorman, Christine, (1991, Sep 16). "Why Do Blacks Die Young?" <u>Time</u>, p. 51.

43. National Center for Children in Poverty (1989 Report). "Alive and Well." p. 88.

44. Whitman, Steve and Legion, Vicki, (1991, Feb 20). "Black Health In Critical Condition." <u>GUARDIAN</u>, p. 7.

45. ICAF 1992 Defense Industries Study Report, "Uninsured and Underinsured Americans." <u>Health Care</u>, p. 13-8.