PHS Tests Multimedia Network to Coordinate Community Services

Community health and human service providers face enormous challenges when they try to collaborate and coordinate across disciplinary, funding, and geographic boundaries. In the search for tools to help make one-stop shopping a reality in the delivery of comprehensive services such as prenatal care, the Public Health Service (PHS) is attempting to refine and evaluate a multimedia communication system called the "Community Services Workstation."

During the past year, a PHS planning and development team has been exploring the most viable combination of software, hardware, and media to support the collaborative work of health and human service providers.

Community Services Workstation

The result is a prototype multimedia telecommunication workstation and network. Each workstation combines the functions of a television, a video cassette recorder (VCR), a computer, a telephone, and a telephone facsimile machine (FAX). It operates software to assist providers as they develop and share client profiles, broker services, make decisions, and protect client confidentiality, among other tasks. The network consists of a series of workstations that can access the system interactively for information and services. The capacity of the Community Services Workstation to produce and distribute stored as well as live video reflects the state-of-the-art in personal computers. If the prototype fulfills its promise, a pregnant drug-addicted 16-year-old will be able to view multimedia profiles of all providers of her choice, or perhaps use an interactive video on prenatal care for at risk pregnant adolescents, produced by her peers. She may "visit," via live interactive video, with a drug treatment provider located across town who can relieve her anxiety about entering the program.

Planning and Development Team

The planning and development team, organized by PHS, is made up of information technologists, a community coalition of health and human service providers, Video Action Fund, a nonprofit video production organization, and MACRO International, a research, management consulting, and training company.

Information technologists at Baylor College of Medicine and Rice University, under a grant from the Integrated Academic Information Management System at the National Library of Medicine, developed software called the "Virtual Notebook System" to support the collaborative work of biomedical researchers.

At the request of PHS, these technologists adapted the Virtual Notebook System to a prototype system of software, hardware, and multimedia to support the Health and Human Services Coalition of the District of Columbia in its efforts to address the local infant mortality crisis. They continue this adaption process now as members of the development and evaluation team.

The coalition, formed to coordinate the various public services represented by its membership and housed at the Howard University School of Social Work, has played a seminal role in the development and evaluation process. Coalition members represent more than 45 public and private service agencies serving the most difficult-to-serve populations. They have already accomplished much of the difficult work of developing the protocols for collaborative work. By organizing themselves into a team of community service providers, they offer the human infrastructure that is necessary for an electronic infrastructure to be relevant.

Video Action Fund was asked to join the team because of its film-making philosophy and capability. It has a strong tradition of producing video from the point of view of those whose voices are rarely heard. The video segments developed for workstation evaluation purposes, for example, will be produced by students at a local inner city high school who will receive community services credit for their work. The adolescents will produce multimedia profiles of some of the agencies in their community (such as prenatal care clinics, homeless shelters, and mental health agencies). These video productions will be available on the workstation to assist patients and clients like themselves who are in need of those services.

MACRO International has, as development team manager, orchestrated a unique planning and evaluation environment for the development of the workstation prototype. The prototype workstation is being developed with significant input from the coalition along with other health and human service providers. These are the potential users who bring their day-to-day service delivery problems to the information and media specialists to shape the development of software, hardware, and media to help them conduct their work more effectively and efficiently.

This team is addressing how a multimedia communication network can be designed to support the unique coordination needs of community health and human service providers. Specifically, it is examining the software, hardware, media, and operational procedures employed to operate telecommunication networks supporting one-stop shopping for prenatal care. The project will also inform planners of future integrated services efforts that will be necessary in order to achieve the year 2000 national health objectives.

Some of the major questions driving the planning and development process include

- What are the information and coordinating functions essential to the provision of automated one-stop shopping for comprehensive services such as prenatal care?
- How can a telecommunication system serve different service delivery environments such as hospitals, community clinics, family assistance centers, public entitlement program agencies, drug treatment programs, and special maternal and child development projects?
- What agreements among community providers are necessary to operationalize a telecommunication network, for example, for handling confidential information and data bases, for developing common or standard needs or service delivery language, for coordinating case management activities

across different types of structures, for establishing accountability among providers to ensure that the client or family receives the appropriate care, as delineated in the case service plans?

• How can video be used to support decisions at the point of service delivery?

Role of the Oversight Committee

The Community Services Oversight Committee is made up of representatives from the following organizations: (*a*) PHS agencies (including the National Library of Medicine, Centers for Disease Control and Prevention, Health Resources and Services Administration, Agency for Health Care Planning and Research, and the Office of Health Planning and Evaluation for the Assistant Secretary for Health); (*b*) Other Federal Agencies (including the Department of Commerce, the Federal Communications Commission, the Department of Education, the Library of Congress, and the Corporation for Public Broadcasting); (*c*) industry; and (*d*) public interest groups.

Based on recommendations from the Oversight Committee concerning hardware and networking options available for distributed multimedia workstations, the planning and development team has focused on the use of enhanced copper wire technology (instead of the more expensive fiber optics) and personal computers (rather than larger and more costly computers). This is a prudent choice for PHS, addressing cost, quality, and access issues by promising a more widely available set of high quality and cost effective services.

This direction has also captured the attention of several industries, including the local and regional telephone companies as well as local service providers not originally a part of the coalition, and sister Federal agencies (including the Social Security Administration and Department of Veterans Affairs), who view this project as one with great promise for their own service integration and delivery needs.

Although there is much work yet to be done before it is ready for operation, a great deal of enthusiasm has been generated at the local and Federal levels to continue the refinement process, while looking for opportunities to field test it.

Conclusion

It is expected that in communities like the District of Columbia, the appetite for technological support of public service functions will only increase. We believe leadership on this front cannot be left solely to the private sector at this time because there is yet no perceived "market" for developing telecommunication technology to serve the underserved. Likewise, neither can the public sector carry the entire burden of producing the best technological solutions for health and social problems.

We welcome all partners as we continue to learn how to harness advanced information and communication technology to serve the public, especially those who are the least likely to be served otherwise.

—LINDA M. HARRIS, PhD, Senior Advisor for Communication Technology Policy, Office of Disease Prevention and Health Promotion, PHS; JOE EAGLIN, Coalition Director, Howard University School of Social Work and MACRO, International; ANTHONY GORRY, PhD, Vice President for Research and Information Technology, Rice University; STEPHEN J. DOWNS, Research Fellow for Communication Technology, Office of Disease Prevention and Health Promotion.

Additional information may be obtained from Dr. Harris, 2132 Switzer Bldg., 330 C St., SW, Washington, DC 20201; tel. 202–205–9370.

NICHD Funds New Perinatal Programs in Washington to Combat Infant Deaths

The National Institute of Child Health and Human Development (NICHD) of the Public Health Service (PHS) has announced a new cooperative agreement to combat the high infant mortality rate among minority populations in the United States.

The community based components of the NICHD agreement will be located at six centers in Washington, DC, and will be coordinated by the Division of Epidemiology, Statistics and Prevention Research of NICHD. The project is co-sponsored by other PHS agencies—the Office of Minority Health and the National Center for Nursing Research of the National Institutes of Health (NIH). The District of Columbia was chosen because of its high infant mortality rate and its proximity to NIH.

By studying high-risk pregnancies and delineating the interactions of social, environmental, generational, biological, and behavioral factors during pregnancy and their effects on the risk of poor pregnancy outcome, investigators hope to be able to design and test interventions that will prove successful in lowering the infant mortality rate in Washington and among other inner-city populations around the country.

The infant mortality rate for Washington was 20.1 per 1,000 live births in 1990, which is higher than that of all 50 States and among the highest for any city with a population greater than 500,000.

The six centers in Washington will conduct a broad range of research projects and interventions that will address the many different components related to the high infant mortality rate in Washington. The goals of these project are to test innovative programs of preconceptional and prenatal care to high-risk women and to study the outcome of optimal neonatal and infant care.

Center projects include improving the use of prenatal care, developing and testing effective interventions to reduce adverse health behavior during pregnancy, targeting intensive prenatal care for high-risk women, and increasing parenting skills to improve use of well-baby clinics for immunization and injury prevention.

The causes and treatment of infant mortality are complex. Several factors have contributed to the high rate in Washington. Among them are high rates of poverty and inadequate or no prenatal care and increased adverse health behaviors, including the use of illicit drugs. In one DC hospital, the incidence of babies born with drug withdrawal symptoms has increased from 3.2 percent in 1982 to 22 percent in 1989. These babies are often premature or low birth weight. Some may be severely addicted and survive with neurological or developmental problems. Prematurity and low birth weight births are major risk factors for infant mortality.

The newly funded centers are the Commission of Public Health of the Department of Human Services of Washington, DC, Georgetown University, Children's Hospital National Medical Center, the D.C. General Hospital Foundation, Inc., Howard University,

and the University of the District of Columbia.

The centers will make use of existing data bases from the Office of Vital Statistics in Washington in identifying specific needs and opportunities for research and interventions that are relevant to the infant mortality problem in Washington.

"We anticipate that findings from this research can and will be applied to other areas of the United States with high infant mortality rates. It is our reasoning that these findings will be particularly relevant to urban areas with problems similar to those found in DC. The interventions developed and tested will be specific to the needs of the individuals and the community and will be culturally sensitive and appropriate," said NICHD Director Duane Alexander, MD.

New and Old Infectious Diseases Pose Increasing Threats to Public Health

Emerging new diseases such as AIDS, as well as reemerging familiar ones—including malaria and tuberculosis—pose public health threats that require more vigorous, comprehensive, and systematic efforts to monitor and combat them, according to a new report from a committee of the Institute of Medicine.

The committee recommended strengthening current surveillance programs to track disease outbreaks; bolstering vaccine, drug, and pesticide development; and improving research and training programs.

Emergence of new infectious diseases is inevitable, the committee warned. Although it is impossible to predict their individual emergence in time and place, attention to the particular circumstances that bring about emergence increases the chance of early detection and intervention, the committee said.

The 225-page report points to an era of complacency as one of the main reasons microbial threats seem to be on the rise.

"Beginning in the late 1950s and continuing into the 1980s, the attention given to acute infectious disease by public health and medical officials, physicians, researchers, and others began to wane, and a shift in focus to chronic, degenerative diseases occurred," the committee said. "The conventional wisdom was that 'science, medicine, public health, and an improved standard of living brought most of these diseases under control.' "

"We acted as though we had won the war on infectious disease, but the fact is, infectious microbes have been around all along and will continue to pose threats to public health," explained Joshua Lederberg, committee co-chair and Professor at Rockefeller University in New York City.

In the meantime, multidrug-resistant tuberculosis has broken out in several U.S. cities; a recent cholera epidemic ravaged Peru and is spreading northward; malaria is on a rampage throughout parts of Africa, Asia, and South America; and AIDS is virtually everywhere.

Without bolstered vigilance and public health measures, "we are vulnerable to something along the lines of the 1918–19 influenza pandemic that killed 20 million people worldwide," said Robert Shope, committee co-chair and director of the Arbovirus Research Unit at Yale University School of Medicine, New Haven, CT. "It's happened once; it can happen again."

Improved Surveillance System

Tracking and responding to outbreaks of disease, the committee emphasized, is the key to confronting effectively and combating emerging microbial threats to health. The report recommends greater Federal and State efforts to develop and implement surveillance strategies. Development could be conducted by the Centers for Disease Control and Prevention (CDC) or a Federal coordinating body, while implementation would be assigned to appropriate Federal agencies.

CDC also needs additional resources to track infections acquired in hospitals, the committee said. In the United States, 1 in 20 hospital patients—some 2 million people—suffer from infections they did not have when they entered the hospital. More than 20,000 of those patients die each year. "Every year, hospital-acquired infections account for between $5 billion and $10 billion in additional medical-related expenses," the report says. A number of factors are to blame, including resistance to antimicrobial drugs and medical advances that require more invasive procedures.

The committee also called on the Public Health Service to develop a comprehensive infectious disease data base that would include information on drug and vaccine availability.

On a global level, the committee recommended that the United States take the lead in promoting development and implementation of an international infectious disease surveillance system. As the AIDS pandemic illustrates, "in the context of infectious diseases, there is nowhere in the world from which we are remote and no one from whom we are disconnected," the report says.

Vaccines, Drugs, and Pesticides

If a strategy to protect the public from emerging infectious diseases is to work, surveillance must be accompanied by an arsenal of drugs, vaccines, and pesticides, the committee said.

Vaccines. For diseases that may be emerging but have not become widespread, economic barriers block vaccine development. "It is understandably difficult to promote private investment in vaccine development for diseases that may not materialize for 5, 10, or 20 years, if at all," the report acknowledges. If a company did stockpile vaccines for potentially emergent diseases, "it would either lose its investment if the disease threat never materialized or be forced to charge extraordinary prices" to compensate for research costs and wasted inventory.

The committee strongly urged the Federal Government to create a comprehensive strategy for vaccine development, including a means for generating stockpiles of selected vaccines and a "surge" capacity for vaccine development and production that could be mobilized quickly.

Two options should be considered, the committee added. The government should either provide purchase guarantees, analogous to farm commodity loans, to vaccine manufacturers willing to develop the needed capacity. Or the government should build research and development and production facilities, similar to the Federal energy and defense laboratories.

Drugs. The research community—including universities and private industry—along with the U.S. Government should introduce measures to help ensure the availability of effective antimi-

crobial drugs and to forestall the emergence of drug resistance, the committee said. This will require replacement drugs to be in the pipeline even while existing drugs are still effective. The resurgence of malaria, for example, is due in part to the malaria parasite's resistance to traditional drugs such as chloroquine.

And in this country, multidrug-resistant tuberculosis has been reported in 13 States. Research on new drugs for tuberculosis had not been conducted because of a false sense that tuberculosis no longer posed a public health threat in the United States.

Pesticides. The committee called for an aggressive effort to make new pesticides available to combat insects, rodents, and other vectors of infectious diseases. Mosquitoes, for example, serve as carriers of infectious organisms and, like microbes, often develop resistance to the chemicals used to control them.

The committee recommended alternative, expedited procedures for licensing pesticides used to stem the spread of diseases. These procedures, it said, "would include a means for stockpiling designated pesticides for such use."

Research and Training Programs

Broad gaps in knowledge exist in regard to what is known about microbial threats to health, the committee acknowledged. Research funding and training of health personnel, it said, should be given higher priority. Increased research should be undertaken on surveillance methods and control strategies; on the costs and benefits of disease prevention, control, and treatment; and on the development and evaluation of diagnostic tests.

The committee also recommended that Congress consider enacting legislation to fund a program, modeled on the National Health Service Corps, for training in public health and related disciplines, such as epidemiology, infectious diseases, and entomology.

Why the Threat is Growing

In the complex set of interactions that result in disease emergence, the human element plays a critical role. Increases in the size and density of populations can promote the spread of disease. Immunosuppression—a result of the aging process, use of certain medications, or other factors—often permits infectious microorganisms to cause disease. And individual behavior, such as sexual activity or use of illegal intravenous drugs, can lead to the transmission of a number of diseases.

Several other factors contribute to the emergence of disease. In shipping goods from one place to another, people may unknowingly transport a disease vector. Land development may situate people close to animals living in the wild, such as deer, that serve as hosts to the ticks that carry Lyme disease. And global warming, if occurring, could result in a wider range for disease vectors such as mosquitoes.

Despite these problems, "there is reason to be optimistic," said Lederberg, pointing to dramatic medical breakthroughs, such as the discovery of penicillin during World War II. "But this much is certain: We have to come to terms with the fact that the microbial world is in competition with us, that it's rapidly evolving—at our expense—and that we haven't applied the knowledge we have to the extent we should to give us the level of security we deserve."

The study was sponsored by the Centers for Disease Control and Prevention, Fogarty International Center, Lederle-Praxis Laboratories, Lucille B. Markey Charitable Trust, National Institute of Allergy and Infectious Diseases of the National Institutes of Health, Rockefeller Foundation, and the U.S. Army Medical Research and Development Command.

"Emerging Infections: Microbial Threats to Health in the United States," is available from the National Academy Press, 2101 Constitution Ave., NW, Washington, DC, 20418; tel. (202) 334-3313 or 1-800-624-6242 for $34.95 prepaid, plus $4.00 shipping for the first copy and $.50 for shipping each additional copy.

NIH Launches Largest Study of Women's Health

The National Institutes of Health has awarded a $140-million, 15-year contract to launch "Women's Health Initiative," the largest coordinated study of women's health ever undertaken.

The Fred Hutchinson Cancer Research Center in Seattle, WA, was awarded the contract and named as clinical coordinating center for the initiative. As coordinating center, it will oversee the work of what will ultimately be a network of 45 clinical centers nationwide carrying out the initiative.

The initiative has been in planning and contract competition stages for about 18 months. It will evaluate the effectiveness of various promising interventions in preventing a number of major diseases in older women. The full 15-year project, costing $625 million, is expected to involve more than 150,000 women.

The initiative will examine treatment and prevention strategies for coronary heart disease, cancer, and osteoporosis. It includes both clinical and observational studies.

The first 15 of the 45 clinical centers will be named early in 1993, while the remaining 30 will probably be named early in 1994. The first 15 centers will develop, implement, and refine the overall program for the initiative.

The objectives of the clinical trials are to test the benefit and risk of hormone replacement therapy, dietary modification, and supplementation with calcium plus Vitamin D on the overall health of post-menopausal women ages 50–79. With some overlap of participants in the different studies, approximately 57,000 women will participate in the clinical trials.

The goals of the observational study will be to improve risk prediction of coronary heart disease, breast cancer, fractures, and total mortality in post-menopausal women; to examine the impact of changes in characteristics of disease and total mortality; and to create resources of data and biological samples that can be used to identify new risk factors or biomarkers for disease, or both. Some 100,000 women will be participants in the observational study.

New AHCPR Booklet Guide to Health Insurance

A new booklet published by the Agency for Health Care Policy and Research (AHCPR) can help consumers choose health insurance that best meets their needs and their budget.

"Checkup on Health Insurance Choices" was developed for Americans facing health insurance decisions for the first time, and those needing to

reassess their current coverage or find a new plan. The booklet also is intended for persons who can afford insurance but have chosen not to purchase it.

AHCPR, an agency of the Public Health Service, conducts and supports research concerning the cost, availability, and quality of health care services. According to some of its findings, people who are adequately insured generally seek health care to prevent medical problems or treat them in the early stages. However, people without adequate coverage tend to delay care until the problems are advanced and treatment is more involved and costly.

Therefore, consumers need more information about their choices regarding adequate health insurance, according to AHCPR Administrator J. Jarrett Clinton, MD.

" 'Checkup on Health Insurance Choices' contains basic, easily understood information to help consumers obtain greater value for their health care dollars," Dr. Clinton said.

The booklet describes the sources of group and individual health insurance and the three major types of plans—fee-for-service (or traditional), health maintenance organizations, and preferred provider organizations. Also included are insurance shopping tips, definitions, a quiz, a checklist of important services, pertinent questions to ask when evaluating plans and a worksheet for determining the reader's best insurance buy.

Medicare, Medicaid, disability insurance, hospital indemnity insurance, and long-term care insurance are briefly described, with resources provided for additional information.

Free copies of "Checkup on Health Insurance Choices" are available through the AHCPR Publications Clearinghouse at P.O. Box 8547, Silver Spring, MD 20907; tel. toll-free 1-800-358-9295 weekdays, 9 am to 5 pm eastern time.

FDA Warns Frequent Yeast Infections Could Be Early Sign of HIV

The Food and Drug Administration (FDA) has advised women that frequent or persistent cases of vaginal fungal infections known as "yeast" infections or vaginal candidiasis may sometimes be an early warning of HIV infection.

According to recent studies, recurrent or stubborn cases of vaginal candidiasis are the most frequent initial clinical manifestation of HIV infection in women. One study showed that of women diagnosed with HIV-caused immunosuppression, 38 percent suffered recurring or persistent cases of vaginal candidiasis as their first symptom.

"Having this information in hand," said FDA Commissioner David A. Kessler, MD, "we have requested that manufacturers of nonprescription drugs for vaginal candidiasis include a new label warning that women who may have been exposed to HIV infection and who experience recurrent or persistent cases of vaginal yeast infections seek professional medical attention promptly."

Miconozole nitrate, marketed under the name Monistat-7, and clotrimazole, marketed as Gyne-Lotrimin, Mycelex-7 and FernCare, are sold without prescription for treatment of vaginal candidiasis in patients who have had a previous episode of vaginal candidiasis diagnosed by a physician. The labeling of these products already states that recurrent infections may result from hormonal changes or use of oral contraceptives or antibiotics.

The additional warning will state, "In women with frequently recurrent vaginal yeast infections, especially infections that don't clear up easily with proper treatment, the vaginal yeast infections may also be the result of serious medical conditions, including infection with HIV, that can damage the body's normal defenses against infection."

"Women should be made aware through all available sources that if they are experiencing recurrent vaginal yeast infections within a 2-month period or if their infections don't clear up with proper medical treatment, they should see their physician for professional diagnosis and treatment," Dr. Kessler said. "In view of the growing epidemic of AIDS among women, it is important that they be alert to possible early HIV infection."

Most of the 13 million cases of vaginal candidiasis that occur annually do not have HIV as an underlying cause, FDA officials said. Pregnancy, diabetes, contraceptive pills, and antibiotics are commonly linked to these fungal infections.

Women who need further information on risk factors for HIV infection or testing for HIV infection should contact their physician or the Centers for Disease Control and Prevention National AIDS Hotline at 1-800-342-AIDS. Separate CDC hotline numbers are also available for Spanish speaking persons (1-800-344-7432) and for the hearing impaired, (TDD 1-800-243-7889).

CDC Recruits Business, Labor in Fight Against AIDS

Business Responds to AIDS, a workplace education program on AIDS, has been launched by the Centers for Disease Control and Prevention (CDC).

The Business Responds to AIDS Program offers resources to help all workplaces, large and small, meet the challenges of HIV and AIDS on the job and in the community at large. The CDC program was developed in consultation with experts from business, labor, health, government, and AIDS service organizations.

Approximately 1 million Americans are infected with HIV, the second leading cause of death for men ages 25–44 and the sixth leading cause of death among women ages 25–44. Americans in this age group make up more than 50 percent of the nation's workforce. Some 76 percent of all AIDS cases are in this same age group.

Lee C. Smith, former president of Levi Strauss International and a supporter of Business Responds to AIDS, said, "Businesses need to play a leadership role in helping to provide HIV prevention information to employees, their families, and the community. It's good for the country, and it's good for business."

James Curran, MD, head of AIDS activities for CDC, introduced the components of the program, which include a centralized resource service at the CDC National AIDS Clearinghouse. This service provides business and labor with easy access to information and materials for developing HIV workplace programs. The service is accessed by calling the CDC Business Responds to AIDS Resource Service toll-free at 1-800-458-5231.

CDC has developed a manager's kit and a labor leader's kit that provide step-by-step guidance through the process of planning, developing, and implementing a workplace HIV-AIDS education program. Available at nominal cost from the resource service, the manager's kit addresses policy development, manager-supervisor training,

employee education, education for employees' families, corporate involvement in the community, and volunteerism. The labor leader's kit addresses similar issues for stewards, labor educators, and workers.

The CDC Business Responds to AIDS program was developed in conjunction with CDC's National Business and Labor Partners group, which assists in promoting and implementing this comprehensive workplace program.

New Orleans Healthy Start Project Takes Male Bonding Seriously

The New Orleans Healthy Start site is looking for a few good men.

Why is an organization that specializes in providing prenatal care and other services to poor pregnant women hiring men as outreach workers? To look for expectant fathers—in gymnasiums, playgrounds, and boys clubs.

These few good men are called *parrains*, a French word meaning godfather. They will act as outreach workers, role models, confidants, and educators to young men who are becoming fathers.

Officials at Great Expectations, the New Orleans Healthy Start effort, believe *parrains* can encourage fathers-to-be to take an active role in the pregnancy, especially in assuring that their partner gets prenatal care. For fathers who may not be aware of the responsibilities of pregnancy, *parrains* will act as motivators and role models.

The *parrain*, along with the female client's *nanan*, or godmother, works with a social worker and case manager. Together, they provide a range of services such as counseling, education, transportation, job training, day care, parenting classes, food, housing and emergency aid.

Great Expectations sets a few requirements for applicants. They must live in the community, have reliable transportation, agree to a drug test and disclosure of past criminal history, have at least a 10th grade reading level, and successfully complete a 26-week training program. Training includes introductory courses on the health care delivery system, interpersonal communications, food and nutrition, and human reproduction. Applicants also must take examinations, attend conferences, and pass a final evaluation. The position pays $16,000 a year.

Wilfred Alexander, Parrain Candidate

In 1984, after physicians pronounced Wilfred and Florence Alexander's son dead shortly after the delivery, Wilfred Alexander began studying infant death records at the local coroner's office. He found that most of the infants were born at low birth weight to parents who were poor and black—statistics that are ominously consistent in most metropolitan communities across the country.

In an effort to spare others in his community the agony that he experienced, Wilfred Alexander is taking aim at the problem. Believing that he can make a difference in the lives of others, he has applied to become a *parrain*.

"We find a lot of kids, young kids, that aren't educated about sex, parenthood, proper nutrition and prenatal care," Alexander said. "My mission is to go out into the community to reach some of these young men and talk to them about the importance of safe sex, prenatal care and parenthood."

Alexander says too many expectant fathers he meets have little or no understanding of the responsibilities a baby brings. To him, these young men are candidates for a mentor in their lives, someone who can show them what being a man really means.

"It's not the image of fathering a child that makes you a man," he says he'll tell them, "it's taking responsibility as a parent that makes you a man."

Mentoring expectant fathers is a tactical and strategic approach of the national Healthy Start campaign. Phase two of the national communications strategy, announced in November 1992 by Health and Human Services Secretary Louis W. Sullivan, MD, and Robert G. Harmon, MD, MPH, Administrator of the Health Resources and Services Administration (HRSA), is a national public service campaign called, "What is a Man?" The campaign is designed to increase the role an expectant father plays in the life of the woman who is carrying his child.

What officials at Great Expectations hope to see is expectant parents taking joint responsibility for their child long before delivery. That responsibility, according to health officials, must include prenatal care and general health care services. If both parents become involved before the baby's birth, the betting is that parental responsibility will increase after the baby is born.

The city of New Orleans has the second worst infant mortality rate in the nation—23.3 infant deaths for every 1,000 births. Only Detroit, MI, has a higher rate.

But New Orleans is the first of the 15 Healthy Start sites to incorporate male bonding into its range of services. By using *parrains* to educate and mentor expectant fathers along with other services, Healthy Start officials in New Orleans hope to see the city's infant mortality rate cut in half.

—CRAIG PACKER, Public Affairs Specialist, Office of Communications, HRSA.

New Food Safety Program for the Elderly Launched by HHS Agencies

Three Department of Health and Human Services (HHS) agencies—the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC), and the Health Care Financing Administration—have started a new food safety education program for nursing homes to help reduce the incidence of serious and life-threatening foodborne diseases that can pose particular problems in the elderly.

The agencies are distributing two instructional videos that explain how to avoid foodborne illnesses, particularly among the elderly, by proper food handling and preparation. The videotape training kits also provide information on the illnesses themselves.

A joint FDA–CDC study, "Foodborne Disease Outbreaks in Nursing Homes, 1975 to 1987," published in 1991, said that, while nursing home residents accounted for just 2.4 percent of cases of foodborne illness in this country, they accounted for 19.4 percent of the deaths from foodborne illness.

The new video package follows one developed 3 years ago by FDA and CDC showing how people infected with AIDS can protect themselves from foodborne illnesses. The current program expands this effort to the elderly and others in nursing homes.

The videotape series takes a two-tiered approach. One videotape is directed toward informing nursing home administrators and medical directors about the scientific aspects of food-

borne illness, such as the causative agents of disease, symptoms, and diagnosis. It also outlines methods for reducing the risk of outbreaks.

The other videotape is targeted to nursing home food service managers and workers. It instructs food service personnel on proper food storage, handling, and preparation techniques and is illustrated with case studies.

The videotapes and case studies are being provided to the agencies' field offices throughout the country, and a limited number are also available to State and local public health agencies on a first-come, first-served basis. Nursing homes and others may order the videotape training kit directly for $39 plus $3 handling from National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161; tel. (703) 487–4650. When ordering, refer to PB92–780857.

Depression, Substance Abuse Linked Genetically, NIMH Study Indicates

A National Institute of Mental Health (NIMH) study provides compelling evidence of a genetic link between depression and substance abuse disorders.

"This means that if someone in your family suffers from severe depression, you and other family members need to be aware that not only are you at risk for developing depression, you also may stand an increased chance of developing a substance abuse disorder," said Loring J. Ingraham, PhD, an NIMH intramural scientist in the Laboratory of Psychology and Psychopathology who conducted the study. His co-investigator on the research was Paul H. Wender, MD, a former NIMH scientist now at the University of Utah.

Researchers have known for some time that a strong genetic component exists for certain forms of severe depressive illness. They have known too that if one person in a family has a substance abuse disorder, other relatives are at risk for becoming addicted to alcohol or other drugs. But, until now, scientists have had difficulty separating the influence of genetic from environmental factors when the illnesses occurred together in the same family.

This is the first study to provide strong evidence of a genetically transmitted liability for the relatives of depressed people to develop substance abuse as well as depressive disorders, said Dr. Ingraham.

The investigators found that people biologically related to depressed individuals were about twice as likely as relatives of nondepressed people to develop either a depressive or a substance abuse disorder—usually alcoholism. The research results were released at the annual meeting of the American College of Neuropsychopharmacology in Puerto Rico in December 1992.

The findings come from a study of 67 people in Scandinavia who were adopted as babies and hospitalized for the treatment of a depressive illness sometime during their lifetimes. The frequency of depression or substance abuse in their biological and adopted families was compared with that of families of adoptees with no history of hospitalization for depressive illness.

Scandinavian countries keep centralized adoption and hospitalization records for their citizens, permitting collection of data on adoptive and biological families that is not possible elsewhere, said Dr. Wender, who collected the data for the study.

The researchers' examination of hospital records showed that among adoptees with a depressive disorder, about 5 percent of their biological relatives also had a depressive disorder. Another 4 percent of their biological relatives had a substance abuse disorder.

The probability that there is a genetically transmitted liability for developing these disorders was bolstered by evidence from the records of biological relatives of nondepressed adoptees. About 2 percent of the biologically related family members of nondepressed adoptees had suffered from depression severe enough to require hospitalization. The rate of hospital treatment for substance abuse for these family members was also about 2 percent.

The frequency of depression or substance abuse requiring a hospital stay in the adoptive relatives of both sets of adoptees was between 1 and 2 percent. This is about the rate of hospitalization for these disorders in the general population, said Dr. Ingraham.

"The beauty of this adoption study is that you can sort out genetic influences from environmental ones," said NIMH Director Frederick K. Goodwin, MD. "This is important because psychiatric illnesses have behavioral components that could be learned rather than inherited. By looking at people who had been adopted at very early ages, this study clearly provides evidence that an increased frequency of substance abuse in the biological relatives of people with a depressive disorder is due to genetic, rather than environmental, factors."

Nevertheless, he pointed out, "it is important to remember that environmental factors can play a pivotal role in the development and progression of these illnesses."

The NIMH study also confirmed past studies showing that men tend to suffer more from substance abuse disorders than women and that women tend to be more likely to have depressive disorders than men. Hospital records showed that about 7 percent of the male biological relatives of adoptees with a depressive disorder had a history of substance abuse requiring hospitalization, compared with about 4 percent of the female relatives. About 7 percent of the female biological relatives of adoptees with a depressive disorder also had a depressive disorder, compared with about 3 percent of the male relatives.

USAID Makes $50 Million Commitment to Fight 'Hidden Hunger'

The U.S. Agency for International Development (USAID) has announced a $50 million project to battle the "hidden hunger" of poor nutrition in developing countries.

USAID Assistant Administrator for Research and Development Richard Bissell outlined the "Opportunities for Micronutrient Interventions" (OMNI) project at the International Conference on Nutrition, the first major world meeting on nutrition, in December 1992 in Rome.

The OMNI Project is part of a global effort launched at the U.N. Summit for Children in 1990. The $50 million U.S. contribution represents the largest commitment to date by a single donor.

The OMNI Project will work to eradicate micronutrient malnutrition and poor diets among women, children, and young adults in the Third World.

The OMNI programs will include field testing, consumer education and information campaigns, and programs to emphasize to host country governments the economic benefits of good

nutrition (such as increased productivity and learning abilities in school).

Bissell said the project will "begin to address the 2 billion people suffering from the ravages of a diet deficient in iodine, iron, and vitamin A. In this era of deliverable primary health care, women and children can be given a new lease on life at minimal cost."

Bissell was joined at the Rome conference by Agriculture Secretary Edward R. Madigan and Health and Human Services Secretary Louis W. Sullivan, MD.

The primary "micronutrients" are vitamin A, iodine, and iron. Vitamin A deficiency is a major cause of blindness, and is associated with high sickness and death rates in young children.

Iodine deficiency retards physical growth and mental development and increases neonatal deaths; lack of fish and lack of iodine in the soil is a major cause.

Iron deficiency anemia has severe consequences during pregnancy, for the mother and the newborn. It is prevalent among people who live off grain crops alone and do not eat meat or vegetables.

In 1969 more than one person in three suffered from hunger. Today, due greatly to efforts led by the United States, that figure is down to one in five. But with the world population climbing by some 100 million each year, the problem is expected to increase, USAID officials said.

In the past 5 years, the United States has provided more than 40 percent of the food aid for African refugees, including the current Somalia famine. It is currently shipping 68 percent of the food aid for southern Africa's devastating drought.

Vaccine for Dengue Haemorrhagic Fever on Threshold of Success

Formal Phase 1 and Phase 2 clinical trials have proved a vaccine to be both safe and immunogenic in humans, thus bringing the Dengue Vaccine Development Project initiated more than a decade ago to a successful conclusion.

The next stage is to test the vaccine for its efficacy under actual field conditions in large numbers of children at risk, the main objective being to prove that the vaccine is effective in preventing dengue and dengue haemorrhagic fever (DHF) among children of the target age group in communities where these diseases are endemic.

There is a general consensus that vaccination can be one of the most cost effective ways to prevent dengue and DHF. For the last 13 years, the World Health Organization (WHO) has supported research on dengue vaccine development conducted at the Mahidol University in Bangkok, Thailand, by Professor Natth Bhamarapravati and his team.

The aim of this project was to develop a safe and immunogenic vaccine against the four strains of dengue virus. The live, attenuated tetravalent vaccine developed by the Mahidol University team was supported by WHO Regional Office for South-East Asia and the Government of Thailand, augmented with funds from the Governments of Australia and Italy, and the Rockefeller Foundation.

Dengue fever was known for two centuries as breakbone fever, due to its association with severe muscular and joint pain as well as high fever. The disease is transmitted by the bite of infective mosquitoes, principally *Aedes aegypti*. Dengue viruses of multiple serotypes are now endemic in most countries in the tropics. DHF hits mostly children. Case fatality rates in untreated patients are known to be as high as 15–20 percent.

Dengue and dengue haemorrhagic fever outbreaks and epidemics threaten more than 85 countries throughout Asia, the Pacific Islands, Africa, and Central and South America. Statistically, dengue is one of the most underreported diseases, with actual cases thought to run in the millions. WHO believes dengue haemorrhagic fever to be one of the most important and rapidly rising mosquito-transmitted infections in the world.

The rise in dengue in tropical and sub-tropical areas is explained by such factors as rapid population growth, expanding urbanization, inadequate municipal water supplies, and difficulties in refuse disposal. These lead to an abundance of new breeding sites for the mosquito vector of dengue and DHF, while diverse human migration patterns disperse vectors and viruses into new areas. For a number of reasons, national public health authorities are often unable to deal successfully with dengue and DHF outbreaks and epidemics.

More Indians Smoke, PHS Study Shows

American Indians—who introduced tobacco to the world—are much more likely to smoke than whites.

In fact, a study reported by the Public Health Service shows that more than twice as many American Indian and Alaskan Native men who are college graduates smoke (37.5 percent) as white men (14.6 percent).

Overall, more Native American men (33.4 percent) and women (26.6 percent) smoke than their white counterparts (25.7 and 23 percent), and this occurs to a varying degree at every education level. More than 40 percent of Native American men without a high school degree smoke, compared with 34.1 percent among white men.

Native Americans, on average, smoke two or three fewer cigarettes per day than do whites. Healthy People 2000, the national health goals for the year 2000, seeks to decrease smoking prevalence among Native Americans to 20 percent or less.

Cardiovascular disease and cancer are two of the leading causes of premature death among American Indians and Alaskan Natives. Although cigarette smoking contributes to both diseases, smoking behaviors among these population groups had not been been well characterized nationally until the new study, which was carried out by the Centers for Disease Control and Prevention in Atlanta, GA.

Health Effects of Exposure to Mustard Gas Revealed by IOM

The Institute of Medicine's (IOM) report, "Veterans at Risk: The Health Effects of Mustard Gas and Lewisite," examines the extent to which long-term health consequences can be attributed to exposure to the two elements.

More than 60,000 U.S. servicemen were used as human subjects during World War II in a research program to develop clothing and skin ointments that would protect against the severe blistering effects of mustard agents and Lewisite, chemical weapons developed for possible wartime use.

The IOM study by a 16-member committee was sponsored by the Department of Veterans Affairs (VA). The

report was released January 6, 1993, in Washington.

The VA has identified seven diseases for compensation as a result of exposure: asthma, laryngitis, chronic bronchitis, emphysema, and such diseases of the eye as corneal opacities, chronic conjunctivitis, and keratitis. By comparison, the committee's list includes the VA findings but adds 12 other health consequences associated with exposure like respiratory and skin cancers, sexual dysfunction, and psychological disorders.

The conclusions and recommendations were presented by committee chairmen David P. Rall, retired director, National Institute of Environmental Health Sciences, O. Michael Colvin, Professor of Oncology and Medicine, Johns Hopkins Oncology Center, Karl Kelsey, Assistant Professor of Occupational Medicine, Harvard School of Public Health, Bailus Walker, Dean, College of Public Health, University of Oklahoma, and Constance M. Pechura, Study Director, Institute of Medicine.

The report is available from the Institute of Medicine, 2101 Constitution Ave., NW, Washington, DC 20418, for $39.95 (prepaid) plus $4 for shipping.

NIMH Issues Publication on Partial Mental Health Care by Organizations

The National Institute of Mental Health (NIMH) has published an abstract on partial care, a relatively new and rapidly growing form of mental health care consisting of a planned program of mental health treatment services generally provided in visits of 3 or more hours to groups of patients or clients.

In 1988, multiservice mental health organizations were the most numerous providers of partial care, with 1,230 of 1,310 (94 percent) providing this program. Partial care was also provided by 332 of 1,489 (22 percent) of general hospital mental health services and 236 of 447 (53 percent) of private psychiatric hospitals.

There were 212,196 patients on the rolls of partial care programs of mental health organizations in the United States (including U. S. Territories) at the beginning of 1988, and 286,715 patients were added to these programs during that year. Multiservice mental health organizations were responsible for a majority of both patients on the rolls and patient additions during the year. New York had 33,256 patients on the rolls, California, 20,627, and Pennsylvania 18,420.

Seventeen percent of partial care patients were children (younger than age 18) and 9 percent were elderly (ages 65 or older); 20 percent were black, and 8 percent Hispanic. Eighty-nine percent were diagnosed as being mentally ill, 7 percent were mentally retarded or developmentally disabled, 3 percent had a primary disability of substance abuse.

Freestanding psychiatric partial care organizations, the only form of mental health organization devoted solely to partial care, numbered 93 in 1988.

Single copies of "Characteristics of Persons Served by Private Partial Care in Mental Health Organizations: United States and Each State, 1988," can be obtained from Information Resources and Inquiries Branch, National Institute of Mental Health, 5600 Fishers Lane, Rm. 15C-05, Rockville, MD 20857.

NIH Panel Issues Report on Triglyceride, High Density Lipoprotein, Coronary Heart Disease

A National Institutes of Health (NIH) consensus development statement on Triglyceride, High Density Lipoprotein, and Coronary Heart Disease may be obtained from the NIH Office of Medical Applications of Research (OMAR).

The report was prepared by a panel of experts who considered scientific evidence presented at a Consensus Development Conference.

At NIH, consensus conferences bring together researchers, practicing physicians, representatives of public interest groups, consumers, and others to carry out scientific assessments of drugs, devices, and procedures in an effort to evaluate their safety and effectiveness.

Free, single copies of the consensus statement on triglyceride, high density lipoprotein, and coronary heart disease may be obtained from William H. Hall, Director of Communications, Office of Medical Applications of Research, National Institutes of Health, Federal Building, Room 618, Bethesda, MD 20892; tel. 301–496–1143.

HRSA Awards $3.9 Million for Alzheimer's Projects

The Health Resources and Services Administration (HRSA) of the Public Health Service has announced a $3.9 million Alzheimer's Demonstration Grant to States Program to provide services, develop projects, and disseminate information to people with Alzheimers disease, their caregivers, and families.

Awards will go 11 grantees:

California Department of Health, Florida Department of Elder Affairs, Maine Department of Human Resources, Maryland Department of Human Resources, Michigan Department of Mental Health, Montana Department of Family Services, Ohio Department of Aging, Oregon Department of Human Resources, Governor's Office of Elderly Affairs, Puerto Rico, South Carolina Commission on Aging, and Washington, DC, Office on Aging.

A key objective of this program is to show how existing public and private resources within a State can be more effectively identified, coordinated, and used to deliver care and support services to people with Alzheimer's disease and their caregivers.

An estimated 4 million Americans suffer from Alzheimer's disease, a progressive brain disorder that causes subtle to severe memory loss, disorientation, and impaired thinking. About 250,000 new cases are diagnosed each year, and the incidence of the disease increases with age.

Federal funds will provide program participants with access to outreach and transportation services, training and support services, and information and referral services. Anyone with Alzheimer's disease may be eligible for services, although the program's focus is primarily on those patients and families who are currently underserved by public and private programs.

HRSA's Bureau of Primary Health Care will administer the grants.

"This program will help Alzheimer patients and their caregivers, who are often family members, to overcome some of the barriers that they face in accessing services," declared the Bureau's director, Marilyn Gaston, MD.

National Health Service Corps Needs More Than 8,000 Health Professionals

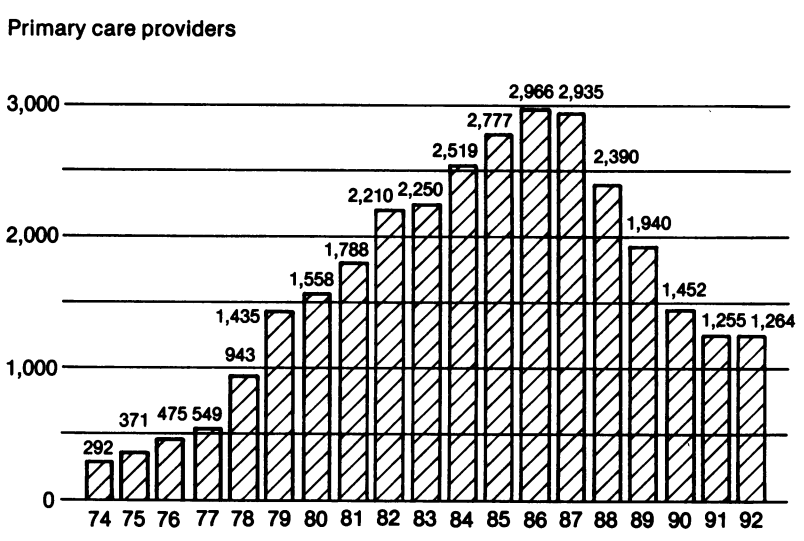
The Public Health Service's National Health Service Corps (NHSC), which provides health care in underserved rural and inner city areas, has begun a campaign to bring in more than 8,000 health professionals in the next 10 years.

NHSC is actively recruiting primary care physicians, nurse practitioners, physician assistants, certified nurse midwives, dentists, and mental health professionals by supporting their training through Federal and community scholarships. Additionally, NHSC is enrolling current practitioners through Federal and State education loan repayment programs and is recruiting primary care providers seeking to make a career change to practice in underserved areas.

About 4,400 primary care practitioners are needed, including physicians, nurse practitioners, physician assistants, and certified nurse midwives, together with about 1,800 dental professionals and 1,800 mental health professionals. In partnership with States and communities, NHSC has health care providers serving in more than 500 rural and inner-city neighborhoods that have critical shortages of primary care professionals.

The NHSC mission is to improve the delivery of primary care health services in health professional shortage areas and reduce the number of shortage areas by placement of health professionals and resources. NHSC provides health care for those whose access to primary care has been limited by socioeconomic, geographic, language, and cultural factors through the placement of health care professionals in communities throughout the United States and its territories.

National Health Service Corps field strength, 1974-92



Typical patients are a pregnant woman in Appalachia who would be 100 miles from any prenatal care if an NHSC provider had not come to her area; an elderly inner-city man who rides a bus to an NHSC clinic, the only accessible medical facility that he can afford; and migrant and seasonal farm workers and their families without a regular primary care provider.

NHSC was revitalized in 1990 and has received budget increases to expand recruitment and retention activities. Fiscal year 1992 funding of $100 million, including $59 million for scholarships and loan repayment, was appropriated. More than 16,000 professionals have served in the Corps since its inception in 1970 under the Emergency Medical Personnel Act (see figure). The Corps was reauthorized through the year 2000 by the NHSC Revitalization Amendments of 1990.

"We see the NHSC's revitalization as part of our front-line response to those areas experiencing the nation's worst shortages of health care providers," said Robert G. Harmon, MD, MPH, Administrator of the Health Resources and Services Administration (HRSA), which oversees the Corps. "This focus on the health care needs of the underserved is why the NHSC was established, and why it is needed now more than ever."

Shortage areas are identified using such factors as physician-population ratios, access to primary health care (distance and time), incomes at poverty levels, and the incidence of infant mortality and low birth weight. The neediest shortage areas take priority for NHSC scholarship and loan repayment recipients; however, all approved sites receive recruiting assistance.

As of 1993, there were 2,271 designated primary care health professional shortage areas, 967 dental care shortage areas, and 709 mental health care shortage areas. The population in need of additional primary health care professionals is estimated at 38 million. NHSC professionals are given a choice among the sites that need their particular skills.

Federal loan repayment. Under the Federal Loan Repayment Program, payments are made toward both government and commercial education loans and for participant's increased income taxes resulting from loan repayment, while they receive full salary and benefits. There is a minimum 2-year commitment.

For many health care professionals, the reality of repaying education loans often leads to positions that may offer high monetary rewards but little professional satisfaction. NHSC offers competitive salary incentives and the opportunity to repay education loans while serving those in need.

Those eligible are fully trained allopathic (MD) and osteopathic (DO) physicians with specialties in family medicine, general internal medicine, general pediatrics, psychiatry, and obstetrics-gynecology; nurse practitioners, physician assistants, and certified nurse midwives; and dentists. The program will be expanded to include selected mental health professionals.

Health professionals agree to provide primary care services for a minimum of 2 years, which they may extend. Applicants must be U.S. citizens with valid, unrestricted State licenses or certificates to practice in the States in which they ask to serve.

Participants receive up to $50,000 for a 2-year commitment, up to $85,000 for a 3-year commitment, and up to $120,000 for a 4-year commitment, along with a competitive salary and benefits package. In addition, a payment is made of 39 percent of the total qualified loans to help pay increased Federal, State, and local income taxes incurred by loan repayment recipients.

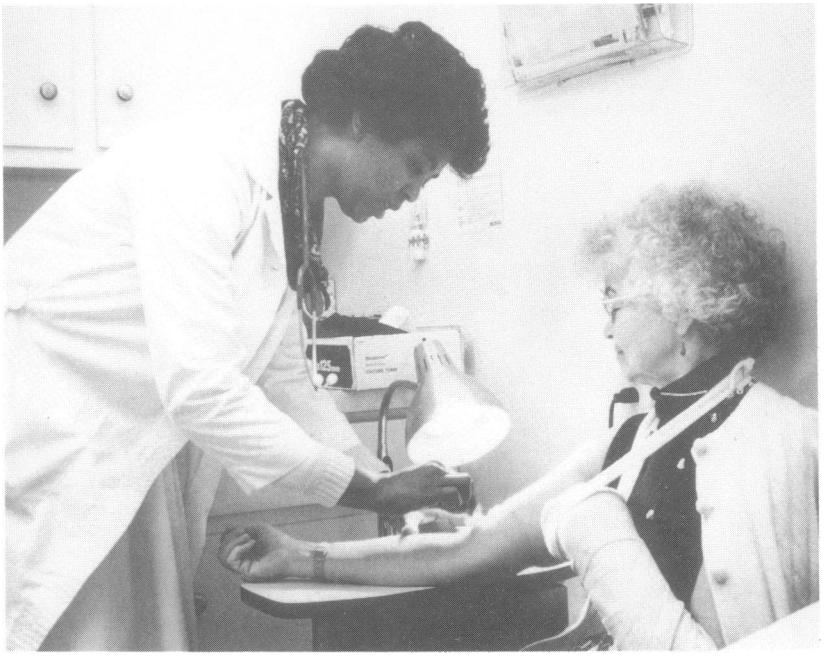
Federal scholarships. The Federal Scholarship Program provides support for tuition and fees, payment towards supplies, and a monthly stipend. Recipients serve 1 year in a shortage area for each scholarship year, with a minimum 2-year obligation.

State loan repayment. Twenty-seven States participate in the NHSC State Loan Repayment Program, which is a Federal-State partnership to help recipients repay education loans under the State Loan Repayment program.

Community scholarships. The Community Scholarship Program, active in 11 States, is a Federal-State-local partnership that supports students committed to returning to their underserved communities upon completion of their primary care training.

Nonobligated providers. NHSC recruits primary care providers who have no obligation and who are completing their primary care training or want to make a career change.

Student programs. NHSC sponsors a variety of programs for health professionals-in-training directed toward those who are seeking ambulatory care educational opportunities in medically underserved communities, opportunities that often are not emphasized in academic institutions. Community and migrant health centers (C/MHCs), health care for the homeless projects (HCHPs), and other community-based systems of care (CBSCs) are linking their service missions with an educational component, providing clinical clerkships and preceptorships, residency affiliations, and fellowships. Most centers receive HRSA assistance to provide comprehensive primary care services. Centers identify highly qualified primary care providers interested in precepting health professionals-in-training at various levels. Health professionals-in-training and preceptors negotiate individual learning contracts that may include



Dr. Sandral Hullett, a NHSC physician, treats an elderly patient. Dr. Hullett is Medical Director of the West Alabama Health Services, Inc., at Eutaw, AL.

- a basis of recognition for academic achievement, such as block, longitudinal, or continuity of care training;
- an outline of learning objectives for community-based clinical experience, to include orientation to the C/MHC, HCHP, or CBSC administration and practice management;
- a delineation of a community oriented primary care project or case study related to primary care interests and a structure for an experience and evaluation process to accommodate student differences in knowledge, skills, and learning styles.

NHSC provides opportunities for students to learn about and experience first hand the delivery of primary care services to the underserved in the following programs:

- NHSC Advocacy Programs, which identify faculty advocates who can provide students and residents with information on NHSC opportunities;
- National Minority Mentor Recruitment Networks, which link primary care mentors with black, Hispanic, and other minority medical students;
- the Health Promotion/Disease Prevention Program, which places medical students in communities for a community-oriented experience in dealing with a problem of the population; participants receive a monthly stipend; and
- The Commissioned Officer Student Training and Extern Program (COSTEP), which recruits students in the health care professions for paid educational stints in shortage areas during school breaks, or as rotations for credit.

Residency training. Some residency programs offer residents the opportunity to follow a panel of patients in an underserved community throughout their training. Many residencies offer block rotations in C/MHCs, HCHPs, and CBSCs. Residents learn to work as a member of an inter-disciplinary health care team, coordinating delivery of services and optimizing patient care outcomes. Residents also learn to utilize other nonhospital-based community agencies. Opportunities for clinical research are available.

Information on NHSC programs is available from NHSC, 8201 Greensboro Dr., Suite 600, McLean, VA 22102; or by calling (1-800) 221-9393, (703) 734-6855 in Virginia.

—LYNN TRIBLE, Public Health Analyst, Bureau of Primary Health Care, Health Resources and Services Administration