
National Heart, Lung, and Blood Institute

Stroke Belt Initiative

Project Accomplishments and Lessons Learned



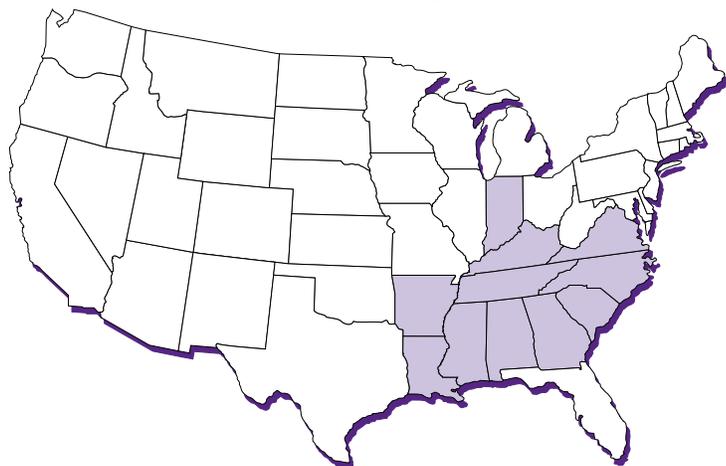
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Overview

Cerebrovascular disease or stroke is the third leading cause of death in the United States. About 500,000 strokes occur each year, and about 150,000 result in death. Age-adjusted stroke deaths are higher in African Americans and men. High blood pressure has long been established as the major risk factor for stroke. More recently, cigarette smoking and obesity also have been found to be significant risk factors for stroke.

Stroke mortality rates differ substantially by State. In the 1950s, epidemiologists documented the higher than average death rate from stroke among people living in the southeastern United States compared to those living in other regions of the country.

The National Heart, Lung, and Blood Institute (NHLBI) examined the 1980 age-adjusted stroke mortality rates by State. Eleven States had stroke death rates that were more than 10 percent higher than the U.S. average: Alabama, Arkansas, Georgia, Indiana, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia. Ten of these States are in a contiguous cluster in the Southeast. Indiana, the remaining State, is located on the



northern border of the Southeast cluster. The NHLBI designated these 11 States as the Stroke Belt.

Similar to the national pattern, African American men and women in the Stroke Belt have higher death rates than white men and women. White men and women in the Stroke Belt also have a higher stroke death rate than their counterparts in other regions of the country. Thus, the higher death rates in the Stroke Belt cannot be attributed solely to the higher proportion of African Americans in these States.

In fiscal year (FY) 1991, the NHLBI funded 11 pilot projects through State health departments to reduce the risk of stroke in the Stroke Belt. These 1-year projects demonstrated the capacity of the health departments to design and implement approaches to reduce risk factors in the community. In FY 1994, the NHLBI funded the State health departments to deliver effective health education interventions, using the methods and materials from the pilot projects, to reduce the overall risk of stroke in the Stroke Belt.

These projects, which lasted 2 to 3 years, fell in one of four general education/intervention categories: (1) interventions in health department clinics and outreach services, (2) church-based risk factor intervention programs, (3) community education and intervention programs, and (4) public education campaigns using the mass media.

On May 9-10, 1996, the principal investigators and other key staff members of the Stroke Belt Initiative projects convened at Morgan State University in Baltimore, Maryland, to present their accomplishments and lessons learned. This document describes the accomplishments of the 11 projects of the Stroke Belt Initiative. ■

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Features of the Stroke Belt Initiative Projects

Below is a quick summary of activities of the 11 Stroke Belt Initiative projects.

- Automated blood pressure measurement—Georgia and Mississippi
- Coalition building—Arkansas, Georgia, and Tennessee
- Community health centers—Indiana
- Contests—Georgia and North Carolina
- Health care ministries or church teams—Louisiana, Tennessee, and Virginia
- Health fairs—Arkansas and Mississippi
- Heart-healthy cooking demonstrations—Louisiana, Tennessee, and Virginia
- Hypertension screening or education—Alabama, Arkansas, Georgia, Indiana, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia
- Nutrition education—Arkansas, Louisiana, North Carolina, Tennessee, and Virginia
- Poster contests—North Carolina
- Public service announcements—Georgia, North Carolina, South Carolina, and Tennessee
- Quality assurance audits—Alabama
- Recipes—Louisiana
- Smoking cessation programs—Indiana, Kentucky, Louisiana, Tennessee, and Virginia
- Training manual development—South Carolina, Tennessee, and Virginia
- Video production—Georgia, Mississippi, Tennessee, and Virginia
- Weight loss programs—Louisiana, Tennessee, and Virginia
- Youth mentors—Tennessee



Alabama

The Alabama Department of Public Health (ADPH) used the Stroke Belt Initiative funding to improve and expand existing blood pressure detection, treatment, and followup interventions in health department clinics. Sixty-three out of 67 local health departments offered hypertension management services, including blood pressure monitoring, free or low-cost medication, and patient counseling and education. The health departments offered these services to Alabama's medically indigent population. To qualify for services, patients had to be in a low income category and have a prescription from a physician that needed to be renewed every 6 months. This ensured a joint relationship between the physicians and the county health departments.

The ADPH employed two strategies to achieve its goal. During the pilot phase (phase I), the State began a program of quality assurance audits to improve the level of care provided to patients with hypertension in local clinics. The quality assurance audits continued during phase II. The second strategy, patient recruitment and coordination, targeted county health depart-

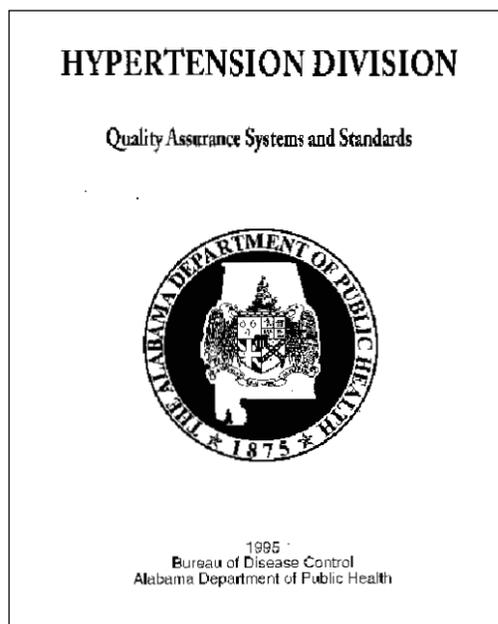
ments with low patient loads to increase patient enrollment. Thus, more patients received an improved level of care.

The quality assurance audits were the first line of the two-pronged strategy. The State established 17 clinical standards and 10 administrative/environmental standards for the care of hypertension. Quality assurance teams visited the clinics and reviewed patient charts for compliance with the 27 standards. The audit focused on deficiencies, or the failure to meet standards. The audit team reviewed 10 randomly selected patient charts for compliance with the 17 clinical standards and then rated the clinic on the 10 administrative/environmental standards. Therefore, the maximum number of deficiencies that a clinic could have was 180 (i.e., 10 times 17 clinical standards plus 10 administrative standards).

The county health departments were required to develop a plan of action to correct any standard that was more than 10 percent deficient (2 or more records out of 10). Counties with excessive deficiencies (40 or more) received followup audits to determine if they had implemented their corrective plan of action.

The team audited 42 counties during the pilot phase and 41 counties in the first 2 years of phase II. (Sixty-three out of 67 counties in the State participated.) Twenty-two of the original 42 counties received a second audit during the first year of phase II. A comparison of the 22 counties with two audits provided an early indication of the effect of the project. In the first audit (FY 1991), the 22 counties had a total of 547 deficiencies and averaged 24.9 per county. The number of deficiencies for each county ranged from 9 (5 percent) to 52 (24.9 percent).

The 22 counties had a total of 482 deficiencies for an average of 22 (12.2 percent) deficiencies per county on the second audit (FY 1994) with deficiencies ranging between 5 (2.8 percent) and 42 (23.3 percent). Thus,



the total number of deficiencies declined by 65 (11.9 percent). The decline in the number of deficiencies did not reach statistical significance ($p=.15$) but showed a trend in the right direction and is possibly of public health importance.

A review of the deficiencies related to the 17 clinical standards showed that deficiencies declined by 7.1 percent, from 510 to 474. The data showed that two standards accounted for more than 45 percent of the deficiencies on both audits. The two standards were:

- the patient's blood pressure was below 140/90 mm Hg at the last clinic visit; and
- the patient was scheduled to return to the clinic within 2 weeks following the last uncontrolled blood pressure reading (140/90 mm Hg or greater).

This information showed the ADPH where to focus its training and monitoring efforts. After a midcourse review, the State health department made some changes to improve the quality assurance program. The ADPH lowered the benchmark for counties needing additional followup, from greater than 40 deficiencies to greater than 30 deficiencies.

Three counties had excessive deficiencies on the first audit, and that declined to only one on the second audit. However, with a benchmark of greater than 30 deficiencies, the numbers would have increased to 6 on the first audit and 7 on the second. The ADPH made the change because the purpose of the audits is to improve the level of care and not endorse the status quo.

Patient recruitment and outreach activities were the second approach in ADPH's two-tiered strategy. The project employed a patient coordinator/recruiter to work with the targeted county health departments with low patient loads. Each year, the project targeted four new counties while continuing

to work with those from previous years. Annual data on the results of this effort are available for the counties targeted during the first 2 years.

To evaluate the effectiveness of the effort, the ADPH compared the number of new patients registered in the clinic during the project with the number of new patients registered in the year before entry in the project. This comparison was deemed valid because the trend of new patients had been stagnant or declining since 1991.

The four counties recruited during the first year of the project had data for 2 years (FY 1994 and FY 1995) of recruitment efforts. A comparison with the number of new patients in FY 1993 showed that the number of new patients increased by 46.3 percent in FY 1994 and by 89.4 percent in FY 1995. The number of new patients increased each year in each county. The overall increase was statistically significant ($p=.05$). The increase from 1993 to 1994 was not significant ($p=.08$) whereas the increase from 1993 to 1995 was highly significant ($p=.006$).

The four counties with only 1 year of recruitment (FY 1995) used new patients in FY 1994 as the baseline. The number of new patients increased by 12.3 percent, which was statistically significant ($p=.02$). As in the above counties, recruitment increased in each county. The rate of increase ranged from 0.7 percent to 59 percent.

The above evidence showed that the number of deficiencies related to standards for the treatment of high blood pressure in health departments declined based on the quality assurance audit. Decreasing deficiencies should indicate that patients with high blood pressure are getting better care in health department clinics. The patient recruitment activities brought in more patients to the hypertension clinics. ■



Arkansas

The Stroke Belt Initiative project in Arkansas was an expansion of the work started in the pilot phase (phase I). During phase I, the Arkansas Department of Health (ADH) conducted extensive data analysis and surveys to document the characteristics of the 10 counties with the highest stroke mortality. These 10 counties are located in the Mississippi Delta Region.

The ADH designed the Strike Out Stroke (SOS) project to form planning groups or coalitions in each of the 10 counties to plan and carry out activities to reduce stroke risk. The purpose of the coalition-building strategy was to involve each community in the decisionmaking process and to build a long-term commitment to continue the project. Each coalition selected the risk factors to reduce or control and the program's strategies for their communities.

The ADH hired a project coordinator to organize each county. This individual met with the health department administrators in each county to compile a list of potential coalition members and key community organizations. They subsequently convened meetings of the targeted community leaders to form the planning groups.

The project was successful in forming planning groups in each of the targeted counties. Many of the groups were initially enthusiastic about the SOS project. The groups held monthly or quarterly meetings. However, the planning groups generally saw the project as the project coordinator's

program and failed to "take ownership" of the project. To keep activities going, the project coordinator joined with established community groups and in some cases worked with a committed individual.

By far, health fairs were the predominant program activity sponsored in the targeted counties. About 9,000 residents participated in these events, and nurses from the local health departments and hospitals screened about 700 people for high blood pressure. The project coordinator played an active role in organizing many of the health fairs. Many counties also directed activities toward middle school students. Teachers taught special lessons on stroke and its risk factors. Stroke survivors spoke in some classes and answered questions from students. Other activities included church-based blood pressure screening, a nutrition workshop, and an interactive television program on stroke.

The project staff believes that the project was successful in educating people in these high-risk counties about the risks of stroke. However, it may have been more prudent to target fewer counties to ensure penetration and adoption of the risk reduction activities. It is well known that coalitions take time to develop. Thus, by working with one or two counties, the project coordinator may have been able to spend more time developing the planning groups more fully and facilitating a shared commitment to the goals of the project. ■



Georgia

The Georgia Department of Human Resources conducted a mass media campaign to encourage persons who were aware of their hypertension to stay on their treatments. The centerpiece of the campaign was the successful Strike Out Stroke (SOS) campaign, which began with the Atlanta Braves professional baseball team during phase I of the Stroke Belt Initiative.

The campaign included public service announcements (PSAs) and live coverage on WTBS-TV as well as hypertension screening and other activities at the stadium during selected games. The project also placed a major emphasis on developing a working relationship with smaller television stations outside Atlanta and with the network of African American gospel and talk radio stations. The print campaign, which targeted small town newspapers, included feature articles, health reports, human interest stories, and letters to the editor related to stroke.

In phase II, the SOS campaign with the Atlanta Braves faced an immediate challenge to its implementation. The players' labor strike at the beginning of the 1994 season made it impossible to start the campaign. Following the strike, the Braves' management focused on baseball-related issues for the remainder of the shortened season. They also were not interested in rekindling the campaign during the 1995 and 1996 seasons. Thus, the strike of 1994 ended this highly visible campaign that served the greater Atlanta area during the three previous seasons.

With the SOS campaign on hold, the project focused on the other parts of the mass media campaign. The project hired a communications firm to help develop and promote the campaign. The firm conducted a training and motivational meeting for local health department staff and

representatives from the targeted local media outlets. Following the meeting, the staff and media representatives initiated the campaign. The purpose of this activity was to develop a core group of media representatives from different areas of the State who would rely on the health department to provide them with educational messages on heart disease and stroke.

The project installed automated equipment in State office buildings to monitor blood pressure, pulse rate, and weight. In the first 18 months, the automated machines recorded 10,457 blood pressures, an average of nearly 20 measurements per day including weekends. The machines also made 16,408 weight measurements during this period.

The project joined the Georgia Stroke Belt Consortium, a coalition of health and medical organizations formed to promote interventions to reduce the risk of stroke in Georgia. Other members include the Association of Black Cardiologists, the Medical College of Georgia, the Centers for Disease Control and Prevention, the local affiliate of the American Heart Association, the Morehouse School of Medicine, and Stop Stroke. By participating in this coalition, the Georgia Stroke Belt project became involved in the development of easy-to-read materials and in screenings at churches, community centers, and State office buildings.

The project also held SOS contests in churches throughout the State. Each church had to present a skit, sing a song, or perform another activity. The activity had to present a stroke prevention message, to be intergenerational, and to last 3 to 5 minutes. The top three winners performed at the 1995 Southeastern Regional High Blood Pressure Conference. The project produced a video of the winning skit, which is being used in senior center nutrition sites and church groups throughout Georgia. ■





Indiana

The Indiana State Department of Health expanded its emphasis in the pilot phase of the Stroke Belt Initiative project from hypertension control alone to include smoking cessation. This 2-year project targeted the low-income populations of two health centers and their adjacent housing projects in Indianapolis.

Both the Citizen's Health Center and the People's Health Center serve low-income populations. Patients at Citizen's are predominantly African American, whereas 80 percent of those at People's are white. Each health center hired a health educator to conduct the program. The interventions focused on community awareness and education and individual counseling by a health educator.

The health educators frequently made presentations and conducted risk factor screenings for the residents of the targeted housing projects and the community. The

presentations provided information on risk factors for heart disease and stroke and the services available at the health centers to prevent or control risk factors. The screenings identified potential patients for the intervention programs at the centers.

Some patients who entered the counseling and followup program were referred by a doctor or other health care provider; others were self-referred. At the initial contact, the health educator explained the program and asked the patient to agree to stop smoking or to make lifestyle changes to help control their high blood pressure. Patients who agreed to participate,

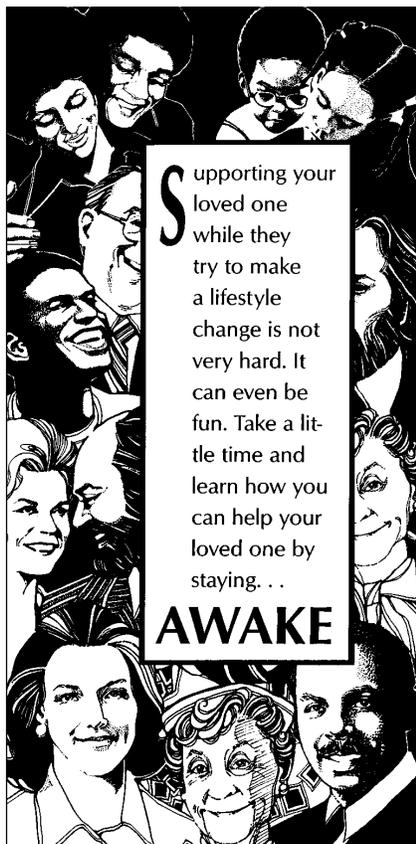
completed a health risk appraisal and intake form. The health educator also provided basic education about the risk factors for stroke and asked the patient to set a behavior change goal.

Most interventions lasted 3 months and consisted of a combination of personal sessions with the health educator and followup and counseling on the telephone. Followup interviews were conducted at 6, 9, and 12 months after the intervention was completed (i.e., made significant progress toward the goal they selected or decided not to see the health educator any more) to measure progress and to evaluate the services provided.

The health educators received 1,125 referrals—575 at the Citizen's Health Center and 550 at the People's Health Center. At Citizen's, 210 patients (36.5 percent) enrolled in the program; 235 (42.7 percent) enrolled at People's. Most of the enrollees (306, or 68.8 percent) were smokers—143 (68.1 percent) at Citizen's and 163 (69.4 percent) at People's.

The smoking cessation component provided a nicotine replacement patch and behavior modification counseling to participants who wanted to quit smoking. The patches were provided free of charge. A physician referral and prescription were needed to get the patches. Patients completed a preassessment and were asked to monitor their smoking behavior before starting the patches so they could develop a plan to handle the psychological challenges of smoking cessation. Patients were asked to return either once or twice a month to get their next supply of patches and to meet with the health educator.

The health educators conducted the 1-, 3-, and 6-month postintervention surveys to identify the quitters and nonquitters. By the end of the project, only 107 (35 percent) of the enrolled smokers had been in the program long enough for a 6-month followup. Of the 107 eligible participants, 13 (12.1 percent) were not smoking. The quit rates



were similar at both the People's Health Center (11.1 percent) and the Citizen's Health Center (12.9 percent).

The health educators found a marked difference in the number of patches used by quitters and nonquitters. Quitters used 90 patches (the full course of treatment) whereas the mean number of patches used by nonquitters was 21 (less than 1 month's worth of patches). Most of the respondents (88 percent) said that the sessions with the health educator were extremely helpful.

Health educators also worked with patients with hypertension to set goals for lifestyle changes. They met with the patients during regular office visits with their primary care provider. They also followed up on missed office visits and worked with the patients to solve adherence problems.

The project developed an electronic database for patient tracking and evaluation. The database contained baseline information from the intake form and the health risk appraisal, data from sessions with the health educators, and periodic measures of risk factor control status.

Although the project provided a valuable service to low-income populations in community health center settings, two problems limited the full impact. First, 2 years were not enough time to organize, conduct, and evaluate the program. It took time to get the project started. Securing and maintaining staff was difficult. Once the hiring and orientation of staff were completed, it

took more time to educate the health center clinicians about the program and build enough confidence for them to refer patients. Indeed, referrals started slowly and increased steadily to peak near the end of the project. Thus, many patients were not in the program long enough to complete the intervention and reach the appropriate followup intervals.

Second, data collection was a major problem. Although the project included an adequate data collection system, two factors limited the actual data recording. Many of the patients refused to complete the intake form and the health risk appraisal. The health educators, when pressed for time, frequently chose not to collect the necessary data in favor of providing education at a teachable moment to meet the immediate needs of the patient. These factors severely limited the number of completed and "matched" records for analysis. Fewer than half the participants had matching baseline data and risk factor status data at the appropriate intervals.

Despite these problems, if programs like this can gain sufficient support from center administrators and clinicians, they can be integrated into the basic services of the center and are likely to be sustained. One year after the cessation of funding from the Stroke Belt Initiative, the project at the Citizen's Health Center remains in place. The project and the health educator are supported through the Center's operating budget. ■



Kentucky

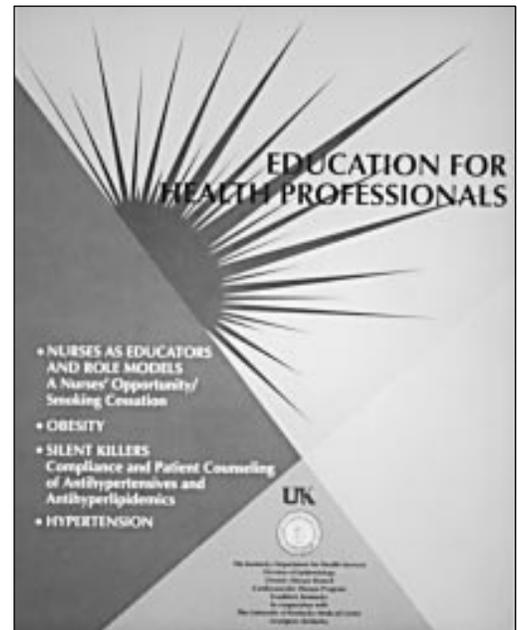
The Stroke Belt Initiative project of the Kentucky Department of Health Services (KDHS) included three components:

- an inservice training program on the role of community health nurses in cardiovascular disease;
- a smoking cessation program for local health department staff, especially nurses; and
- extended followup to smokers who agreed to quit and received a prescription for nicotine patches from the health department.

The State health department employs more than 800 nurses at 153 delivery sites. The training program—developed during phase I of the Stroke Belt Initiative project—targeted public health nurses who did not receive training during the pilot phase. This self-study package consists of four modules—two on hypertension, one on smoking cessation, and one on obesity. The University of Kentucky College of Nursing approved the course for continuing education credits. The nurses also attended a 6-hour course on how to give effective smoking cessation advice to patients.

The project also conducted smoking cessation classes in local health departments to reduce the number of staff who smoke. The purpose was to increase the number of nurses and other staff who would routinely interact with clinic patients who smoke. Staff members who smoked were less likely to interact with smoking patients.

The health department received a free allotment of nicotine transdermal patches for use in an organized smoking cessation program for low-income smokers. The project devised a program of counseling



and followup using public health nurses. To participate in the free nicotine patch program, smokers had to attend a support group.

Public health nurses conducted smoking cessation classes and support groups at local health departments. They also followed up these smokers beginning on the date that the patch prescription expired and at the 2-week, 1-month, and 3-month intervals. The purpose of the followup was to determine their smoking status and to encourage those who resumed smoking to quit again. Of the 828 participants, 340 (41.1 percent) completed the nicotine patch therapy. Records indicate that 248 participants (30 percent) quit smoking for at least 1 day. At the 3-month followup, 132 (15.9 percent) of the total number of participants were still not smoking. ■



Louisiana

The Louisiana Department of Health and Hospitals (LDHH) has worked with churches for a number of years. During phase I of the Stroke Belt Initiative project, the LDHH established high blood pressure prevention and control programs in 26 churches in the New Orleans area. The interventions consisted primarily of awareness and education activities, blood pressure screenings and followup, and heart-healthy cooking demonstrations. Some churches also conducted weight loss and smoking cessation sessions.

The phase II project was a 2-year effort to expand the program to churches in other areas of the State. The LDHH subcontracted with the National Kidney Foundation of Louisiana and the Natchitoches Outpatient Clinic to achieve this goal. The latter subcontractor concentrated its efforts in northern Louisiana. The subcontractors hired consultants from the targeted communities to recruit churches and help them organize and establish programs.

The consultants followed the procedure established in phase I for recruiting churches. In phase I, the project tried

unsuccessfully to recruit churches through the State affiliate of a national organization of churches. While the organization was supportive of the project, this did not result in the recruitment of any churches. Therefore, the project had to recruit churches individually through their clergy.

Thus, in phase II, the first official contact with the church was always made through the clergy because they usually determined whether the church would participate or not. However,

the consultants frequently used other contacts within a church to get an introduction and initial meeting with the clergy. At the meeting with the clergy, the consultants explained the purpose and nature of the project, the benefits to the church, the support that the project would provide, and the responsibilities of the church. After the overview, they asked the clergy to commit the church to participate in the program.

Once a church agreed to participate, the first step was to establish a health care ministry (HCM), an organization of the church responsible for organizing and implementing the health programs in the church. The clergy appointed the coordinator of the HCM. The clergy also introduced the program to the congregation during regular services and asked for volunteers to serve on the HCM. In some churches, the consultant was allowed to address the congregations to promote the program.

The consultant trained the members of the HCM. The 4-hour training session consisted of an orientation to the programs, risk factors for heart disease and stroke, referral and followup techniques, and medical record systems. The members also attended a course to become certified in blood pressure measurement.

The HCMs planned and carried out program activities in their churches. The consultant assisted the HCMs in planning and provided equipment for program events. The consultant was generally onsite for these events to answer questions and solve any problems. They also recruited health professionals to conduct educational sessions on nutrition, smoking cessation, exercise, and other topics.

Thirty churches agreed to participate in the program and established HCMs. The HCMs from 22 churches (156 members) attended the 4-hour training workshop and completed the blood pressure measurement course. Scheduling the training sessions was often a challenge. There were many cancellations, often on the night before the scheduled event. The consultants had to maintain

Soul Food Cooking



The Heart Healthy Way

Louisiana Office of Public Health
Nutrition Section
Chronic Disease Control Section

Louisiana

flexibility and work with the HCM to reschedule the training. Still, eight of the churches that agreed to participate did not attend a training workshop.

The HCMs at 16 churches conducted blood pressure screenings and other program events. The consultant supervised the initial blood pressure screening event at each church. Many of the churches reported a large attendance at their first screening and educational seminars. The remaining six churches with trained HCMs did not conduct a program event. Two churches decided not to conduct a screening because of the fear of liability issues. Another church decided that it was too much work. The three other churches did not schedule an event but indicated that they planned to do so.

The project contracted with a nutritionist to teach church members to prepare heart-healthy meals. Several churches identified the members whom their congregations considered to be the best cooks. The nutritionist worked with these people to modify their favorite foods into heart-healthy dishes. They served these heart-healthy selections to the congregations at food events held by the churches. Church members were always eager to try foods prepared by their best cooks. The members were not told that the food was heart-healthy until after they tried the food and said they liked it.

The nutritionist also prepared recipes of all the heart-healthy dishes served in the churches. The LDHH reproduced the recipes in a cookbook, *Soul Food Cooking—The Heart-Healthy Way*. The consultants distributed the cookbook to the churches so that all members would have access to the recipes.

The consultants kept a log of the dates of their initial visits with the clergy, when the clergy committed the church to participate, the training of the members of the HCM, and each program event. Analysis of these logs showed that it took an average of 46.4 weeks (10.8 months) from the initial visit with the clergy to the first program event. The times ranged from 2.6 weeks to almost 2 years

(22.2 months). However, eliminating the last three churches that took 18.8, 19.0, and 22.2 months reduced the average time to 8.3 months. The patience and persistence of the consultants in getting all the churches to participate was responsible for the longer time periods. Thus, the process of recruiting churches and moving them into action takes time. The consultants continue to work with three other churches to implement programs.

The consultants reported that keeping the HCM members motivated and committed to the screenings and other activities was difficult in many of the churches. They attributed the problem primarily to the leadership of the coordinator. HCMs with strong coordinators tended to maintain a consistent flow of program activities whereas those with weak leaders held activities much less frequently. Thus, it is very important to select a strong coordinator in the beginning because the clergy is generally unwilling to replace an ineffective coordinator.

The coordinators met with other key HCM members to discuss their experiences and share information between the churches. Difficulties in getting HCM members to participate actively in planning and carrying out program activities were a common theme. Some coordinators stated that sometimes they had to conduct screenings by themselves.

The churches agreed to submit monthly tally sheets summarizing their screenings and other activities. Some churches submitted these reports, but most did not, even after followup telephone calls and letters from the consultant.

Finally, after the conclusion of the project, many of the churches continue to hold screenings and other program activities. Three churches that did not hold an event during the project period indicate that they still plan to conduct screenings. This shows that the benefits of programs to prevent heart disease and stroke are evident to the leadership of many churches. Projects like the Stroke Belt Initiative provide the stimulus for them to get started. ■



Mississippi

The Mississippi State Department of Health (MSDH) proposed a new initiative for phase II of the Stroke Belt Initiative project. A hypertension education and intervention program targeted high-risk populations—those with high blood pressure and those at risk of getting high blood pressure—in the State's six most southern counties. These counties have a total population of 378,505, of which 68,367 (18 percent) are African American. The poverty rate among African Americans in these counties is especially high—41 percent compared to 16 percent among whites. The counties are also classified as medically underserved.

To reach the high-risk population in the targeted counties, the MSDH developed its program around automated blood pressure measurement (ABPM) machines. The machines provided the targeted communities with a free method of checking blood pressure. Along with each machine was a toll-free telephone number for counseling and referrals. Two machines were initially placed in March 1994 in each county—one in the county courthouse and the other in the local public health department, two areas used by the high-risk populations.

The ABPM machines displayed a message instructing persons with elevated blood pressure readings to see a doctor. It further instructed those without a source of care or resources to pay for care to call a toll-free number. The project nurse answered the toll-free calls and helped patients find a source of care. The nurse also arranged for drugs, nutrition counseling, and social services as needed.

The initial 12 automated machines recorded about 200,000 blood pressure readings from April 1994 through June 1996. The monthly total ranged from 4,150 to 10,608. Machine usage was greatest during May through September each year. The lowest usage occurred during December, January, and April.

Although the communities responded immediately to the automated machines, usage of the toll-free telephone number was less dramatic. After several months of

operation, the number of calls remained at 1 or 2 per month. The project nurse, who also had experience in marketing, visited several of the sites to observe the usage and talk with some of the users. She discovered that many users did not see the instructions to call the hotline and others thought that they would have to pay for the services.

To correct this, the staff designed a new sticker and scorecard (for users to record their blood pressure reading). The new sticker included the following caption, "Free Call, Free Help . . . A Registered Nurse Is at Your Fingertips!" The sticker was printed with red letters on a yellow background to make it more noticeable. The new scorecard contained the same message and design. The new stickers and scorecards were placed on all the machines. The number of calls to the hotline increased to 44 after 3 months and continued to increase thereafter.



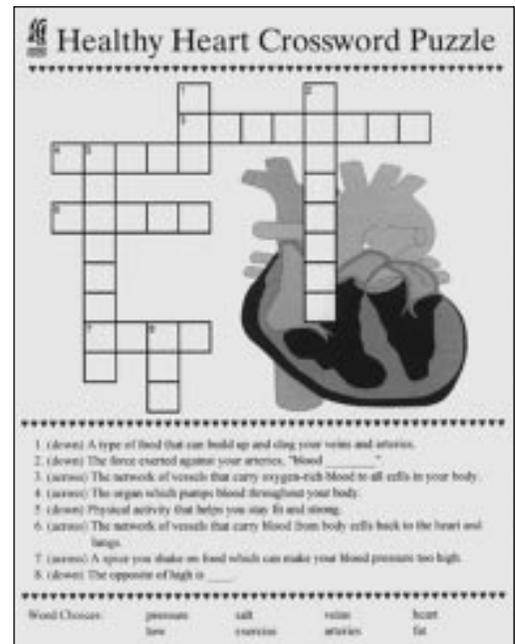
The automated machines also attracted the attention of private health care facilities. A regional medical center purchased three machines for the project. They placed one machine in the emergency department and the other two in the community. In 9 months of operation, these three machines recorded an additional 54,208 blood pressures. Thus, the new machines combined with the initial 12 machines recorded a total of 249,644 readings. This positive experience persuaded several other medical centers and businesses to make a commitment to

Mississippi

purchase additional machines and link them to the project. At the end of the project, 20 machines were operating in the six counties.

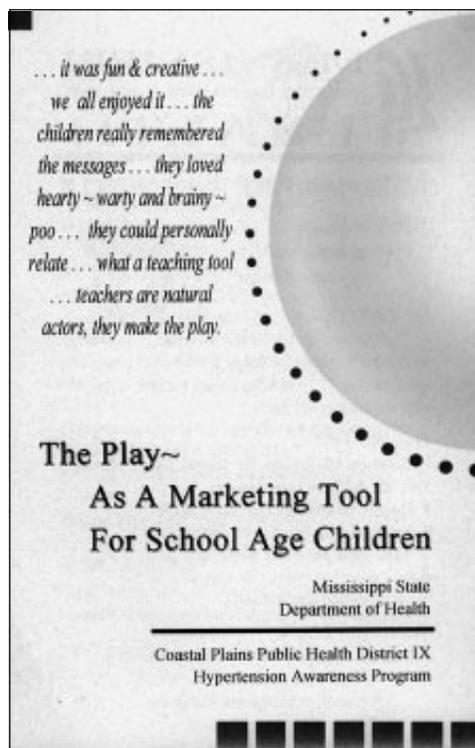
To complement the automated screening, the project maintains an aggressive traditional blood pressure screening, counseling, and referral program. Trained teams conduct screenings in churches, community centers, civic organizations, health fairs, schools, banks and other businesses, and other community gatherings. Participants with elevated readings receive counseling and referrals. Those without a source of care or the ability to pay for their health care are given the toll-free telephone number and instructed to call it.

Since fall 1994, the onsite screening program has reached more than 5,000 people. Data analyzed on the first 1,594 participants in the onsite screenings showed that 35.9 percent had blood pressure readings greater than 140/90 mm Hg. The rate for men was 41.2 percent compared to 32.6 percent for women. As expected, the proportion of elevated readings was directly related to age and range from 13 percent in persons age 18 to 34 to 64.3 percent in those age 65 and older. Of the 572 persons with high



readings, 227 (39.7 percent) knew they had high blood pressure and were taking medication. Conversely, 345 (60.3 percent) represented potentially new cases of high blood pressure.

In addition, the MSDH hypertension program promoted primary prevention and targeted elementary school children. The staff wrote a one-act play, *The Angry Heart*, to promote healthy lifestyles. The characters of the play represent body organs and tissue—Heart, Lung, Brain, Muscle, and Stomach. The play is usually delivered in the auditorium before the entire student body. Teachers serve as impromptu actors, which makes the play entertaining as well as informative. Following the play, the students complete a healthy heart crossword puzzle based on the information presented in the play. During the 1995-96 school year, 9,268 children viewed a live enactment of the play. A videotape of the play is also available to the schools, and the play was selected for presentation at the Prevention '96 conference in Dallas. ■





North Carolina

The North Carolina Department of Environment, Health, and Natural Resources continued to focus its Stroke Belt Initiative project on high blood pressure in African Americans. The project combined a mass media campaign with community outreach activities and professional education.

The mass media campaign was a statewide effort. Although it included the major television and newspaper outlets in North Carolina, the primary targets were radio stations and newspapers that served predominantly or large African American audiences. A major emphasis was placed on reaching the network of African American gospel radio stations.

The project formed core groups of media representatives and local community leaders to develop culturally appropriate educational messages. Staff members, along with health care professionals and other volunteers, were trained to give interviews on hypertension to local television, radio, and print media in the promotion of the media campaign. Accordingly, the campaign has received wide and continuous coverage in the major and targeted media.

The community outreach activities included the dissemination of easy-to-read educational materials, blood pressure screenings, poster and letter-writing contests, activities with churches, and risk factor reduction classes in community centers. They compiled the educational materials into a resource guide, which was distributed to health agencies across the State. The agencies could order the materials in the guide from the project.

A poster contest among high school students was a major

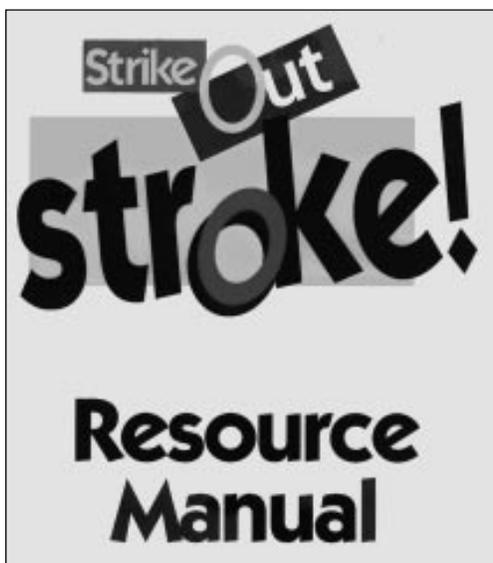


First-place winner An-War Pace (center) from Enloe High School with Dr. Dale Simmons of the State health department (left) and NHLBI director Dr. Claude Lenfant (right); winning poster (inset)



success. The theme of the contest was "High Blood Pressure Control Is a Family Affair." The contest involved ninth- and tenth-grade students in the Raleigh area. The staff promoted the contest throughout local school districts, but only three schools agreed to participate. Project staff worked with the teachers in these schools to provide students with the background information to prepare fact-based posters related to the theme. A lesson plan focusing on hypertension was taught to 727 students in ninth- and tenth-grade health education and art classes.

The students designed and submitted 500 posters. The projects established a seven-person committee to judge the posters. The committee included teachers and staff members from the county and State health departments. The posters were judged on the following criteria: appropriateness, originality, creativity, and neatness. The winners were determined by the highest scores. The judges chose first-, second-, and third-place winners as well as four honorable mentions. Most of the posters



North Carolina

(continued from page 15)

(350, or 70 percent) came from one school as did the three winners.

The project held an award ceremony to honor the winners and all students who participated in the poster contest. The top three winners were awarded plaques and gift certificates (\$75 for first place, \$50 for second place, and \$25 for third place). The honorable mentions received plaques. Local businesses donated gifts to supplement these prizes. Jonathan B. Howes, secretary of health for the State of North Carolina, presided over the ceremony, and Dr. Claude Lenfant, NHLBI director, presented the awards. All participating students, teachers, and schools received certificates.

The winning posters were displayed across the State in public buildings and as PSAs on television and in local newspapers. Some radio stations used the wording for short PSAs as well. In another positive development, teachers from the two schools that submitted fewer posters and did not have a winner promised to do a better job next time to make their schools more competitive. Principals and teachers from nonparticipating schools also vowed to participate in the next contest.

The project collaborated with African American ministers to select appropriate educational materials for distribution to churches during the month of May for High Blood Pressure Sunday activities. The most popular item was a fan—developed during phase I of the project—with a health message printed on one side. Local health departments worked with local morticians to get the fans produced at no cost. The project compiled the selected materials

into a High Blood Pressure Sunday kit, which was distributed to African American churches across North Carolina.

The project also worked with African American churches to sponsor letter-writing contests for elementary school children. The children wrote letters to parents or other significant adults asking them to control their blood pressure or change a high-risk behavior, such as smoking cigarettes or eating high-fat foods.

Local health departments conducted high blood pressure screenings in local convenience stores and fast food restaurants between 5 a.m. and 8 a.m. These screenings targeted African American men who were waiting for transportation to their jobs. At first, many were reluctant to participate, but they became more responsive to screening after the staff returned to follow up on them. The staff also was able to obtain additional information on diet and lifestyle behaviors. Based on this limited experience, convenience stores and fast food restaurants have potential as screening sites for young African American males and others who do not use local health department services and do not have a regular source of care.

Other county health departments set up nine weekly educational sessions in four community centers and housing developments that included classes on stress management, exercise, and nutrition. These sites were chosen to improve access to these educational opportunities for low-income individuals who ordinarily would not be able to take advantage of such classes in other settings. ■



South Carolina

South Carolina has the highest age-adjusted stroke mortality rate in the United States. In 1994, the stroke mortality rate in South Carolina was 31.8 per 100,000 for whites and 65.4 per 100,000 for African Americans. Because of this disparity, the Center for Health Promotion of the South Carolina Department of Health and Environmental Control chose to focus its efforts in the African American community.

The goal for the South Carolina Strike Out Stroke (SC SOS) project was to improve hypertension awareness, treatment, and control among African Americans in the State. The project sought to increase the number of community-based programs to control high blood pressure among African Americans.

The Center for Health Promotion chose to work through three channels within the African American community: churches, the media, and beauty shops and barbershops. This capacity-building project included the development of training manuals for health professionals and lay volunteers to develop stroke prevention initiatives within each channel.

The church-based training manual, *Guidelines for Working With Black Churches*, was developed to train professionals to work with the faith community to implement stroke prevention initiatives. This manual includes many of the do's and don'ts for different denominations within a community. Training for professionals on the concepts presented in the manual was completed in a variety of settings including the Minority Health Issues Conference, which draws a variety of professionals statewide who are interested in making a difference in the health status of African Americans in South Carolina.

Using the training manual developed for lay volunteers, *Guidelines for African American Church-Based Health Promotion*, the process of identifying and training local lay volunteers began. This how-to manual employs a step-by-step approach to developing health activities within the church, using trained area health professionals as resources. These volunteers were trained

to start or expand health promotion efforts in the church. Although these health promotion efforts included stroke prevention, the manual included a generic process on how to initiate health promotion efforts, which was useful in implementing a variety of health-related issues.

Reaching African Americans Through Media Channels stresses the importance of the African American media as an avenue to get positive cues and messages out to the community. This manual was designed for professionals either who do not know how to access this useful channel within their communities or who are unfamiliar with the availability of specific media resources for African Americans. Training using this manual was offered to health professionals through conferences that attract professionals statewide.

Health promotion staff members were trained statewide to use this important communication avenue. This activity continues beyond the contracted period of performance. The manual provides specific information on stroke and

(continued on page 18)

GUIDELINES FOR AFRICAN AMERICAN CHURCH-BASED HEALTH PROMOTION

Center for Health Promotion
and
Office of Minority Health

**South Carolina Department of Health
and Environmental Control**

South Carolina

cardiovascular health, including camera-ready articles, PSAs, and additional resources. One media component addresses radio stations and newspapers owned and operated by African Americans. The media were encouraged to use the materials as they are or in developing health education segments. Linking local African American media personnel with local health professionals is under way.

The project developed two manuals on the use of beauty shops and barbershops as a resource for spreading the word about stroke prevention. One is a how-to booklet for shop owners; the other is a manual for health professionals. Information is included on State and local representatives of beauty shop and barbershop associations and hair care professionals as contact persons in every region in South Carolina.

To introduce the concept of SOS activities, the staff continues to make presentations to statewide organizations about the availability of training for health advocates. To maximize the number of people who can take ideas back to their communities, the SOS coordinator has given presentations at State conventions, conferences, and special group

meetings. The most recent presentations were made to organizations such as the Palmetto State Barbers Association, the South Carolina African Methodist Church Youth Convention, and the State Baptist Conference.

SOS has worked to maximize the impact of the project by coordinating with other projects that are working on risk factors for stroke, such as diabetes and smoking. SOS is working with the African American Initiative on Diabetes through the efforts of the Diabetes Control Program within the center. The project also is working with the American Cancer Society on the Beauty Shop Health Advocate Project.

The framework of the project was capacity-building of the community—among both health professionals and lay volunteers. This framework has provided opportunities to link with a variety of organizations statewide that are interested in reducing disease risks among African Americans. The most critical outcome of this project has been that, because it was based on building capacity, the life and impact of the project will live well beyond the funding. ■

Tennessee

In Nashville, the local health department recruited and worked with African American churches to set up programs for smoking cessation, hypertension control, and weight reduction. During the first year, the staff targeted five churches to implement the project. Two other churches were added in the second year. In each church, the clergy appointed health promotion teams to plan and implement project activities. Each team included a coordinator, also appointed by the clergy.

The project staff trained the church teams and worked closely with the church teams, especially during the early stages, to plan project activities. This included assisting with the needs surveys of church members and providing ideas for kickoff or initial projects. The project staff also attended team meetings when possible and provided encouragement to the coordinators and the members.

The church teams demonstrated that they could maintain an ongoing program within their congregations. They readily used existing education and risk factor reduction programs from voluntary health and other community agencies. The teams also were very creative in devising other ways to communicate health messages to their congregations.

Innovative activities developed by the teams included a children's letter-writing campaign, production of a play about risk factors, and food-tasting demonstrations. The letter-writing campaign was both a contest and a health intervention. Children from the churches wrote letters asking a significant adult in their life to quit smoking. Each child followed up at 3, 6, and 12 months to see if the significant adult was still smoking. The planners used the contest format to encourage maximum participation by the children and cooperation from the significant adults. A panel of church members and health department staff judged each of the letters and selected a winner for each age (age 6 to 11). The contest winners each received \$50 and a certificate at a special awards ceremony.

One team decided to use drama to communicate health messages to its congregation. They asked a local playwright to write a play depicting what a typical African American family might experience when confronted

with the need to lower its risk of heart disease and stroke. High school and college students performed the play during church services, and it was videotaped for future use when the actors were not available.

Food-tasting events played a major role in building support for and sustaining the program. At a meeting of the clergy from participating churches, the team from the host church prepared and served a heart-healthy meal. The clergy learned how the food was prepared only after they finished eating and acknowledged how good the food tasted. The taste of the food so impressed the clergy that most included messages about heart-healthy eating and the program in their Sunday sermons. Many of the teams also conducted food-tasting events for their congregations, using the same strategy.

The Nashville project succeeded in recruiting churches, training teams among the congregations to carry out program activities, moving the teams to action, and sustaining their actions over time. The staff kept logs with the dates of the completion of each milestone in each church. Analysis of these data showed that it took an average of 11.6 weeks (or 2.7 months) from the initial contact with the church to the point when the pastor commits the church to participate. It took another 20.4 weeks (or 4.8 months) from the commitment to participate to the appointment and training of the church team. The first program event took place, on average, 10 weeks (or 2.3 months) after training the church team. Thus, it takes about 42 weeks (or 10 months) from the initial contact with the church to the first program event.

The project in Chattanooga also attempted to work with churches, but initial efforts did not meet with much success. The project staff sought the counsel of the Nashville staff. After several discussions, representatives from Nashville visited Chattanooga to meet with local church leaders. The delegation from Nashville consisted of clergy members, members of the church teams, and staff. Following the meeting, churches in Chattanooga began implementing the program. Overall, activities in these churches continue beyond the official end of the project. ■



Virginia

The Stroke Belt project in Virginia is a unique collaboration between the Virginia Department of Health (VDH) and the Baptist General Convention (BGC) of Virginia to promote stroke risk reduction programs in African American churches. This 2-year project expanded the activities of the Virginia Cardiovascular Risk Reduction (VCRR) project to work with the BGC. The VCRR project conducts statewide hypertension detection and control programs.

The BGC is an association of more than 1,000 independent African American churches located throughout the Commonwealth of Virginia. These churches have more than 200,000 members. The BGC health care ministry (HCM) has a full-time director who is an ordained member of the clergy. The BGC-HCM has a history of working with health agencies to implement programs in member churches.

The VDH and the BGC-HCM agreed to focus on three risk factors—high blood pressure, smoking, and obesity. For more than 10 years, the VDH and the BGC-HCM have collaborated to conduct blood pressure screening in BGC member churches.

The director of the BGC-HCM recruited the churches, trained the volunteers, and supported their efforts. However, the expanded project required more than one person to coordinate and support the activities of local churches. Thus, the VDH and the BGC-HCM established a system where regional coordinators worked with the churches in their area. The BGC-HCM director recruited 10 volunteer coordinators from area churches.

The clergy at the regional coordinators' home churches pledged to support the efforts of the coordinator and to make their church the model for the region. The responsibilities of the regional coordinators were to recruit churches, assist the churches in organizing to carry out the program, train church team members, and deliver the programs and materials selected for implementation.

To facilitate the high blood pressure component, a group consisting of VDH staff, the

BGC-HCM director, three regional coordinators, four blood pressure measurement (BPM) specialists, and one clergy member developed two training manuals and a brochure. They designed one manual to train trainers and the other to certify BPM specialists (students). A brochure called *Stroke Busters* was an educational piece for the congregation.

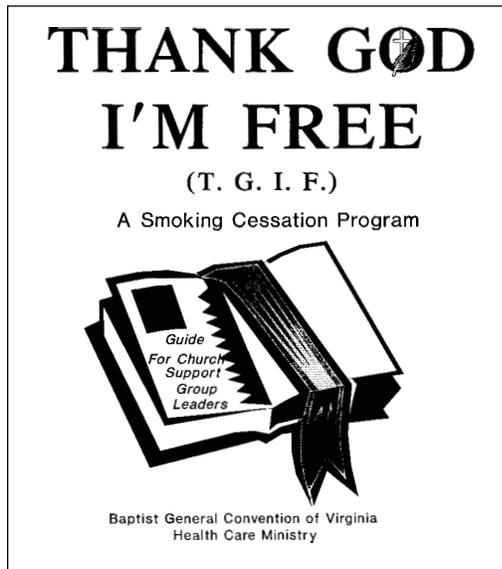
Next, the VDH staff and the BGC-HCM director trained the 10 regional coordinators. While supporting the churches already involved in hypertension detection, the regional coordinators also recruited new churches and helped them set up HCMs. This increased the number of participating churches to 100. The coordinators certified 100 new specialists and recertified 50 specialists. Seventy-nine additional BPM specialists did not require recertification.

The certified specialists measured the blood pressures of 3,723 church members in FY 1995. Elevated readings were found in 265 people who were not under the care of a physician for high blood pressure. Referrals were made for 282 individuals with elevated readings who were already under treatment for hypertension.

The VDH and the BGC-HCM selected the smoking cessation program from Clergy United for the Redemption of East Baltimore (CURE)—an NHLBI-funded study. The American Lung Association (the local sponsor of the CURE Program) trained the regional coordinators to implement the CURE smoking cessation program. The BGC-HCM director and the regional coordinators revised the CURE materials to be more suitable to the BGC and renamed the program "Thank God I'm Free" (TGIF). The materials included a TGIF trainer's manual, a guide for church group leaders, a devotional for group participants, a program tracking form, an intake form for participants, an information form for group leaders, T-shirts, and coffee mugs.

The regional coordinators conducted TGIF training for group leaders in seven regions. Although it was not difficult to get volunteers

Virginia



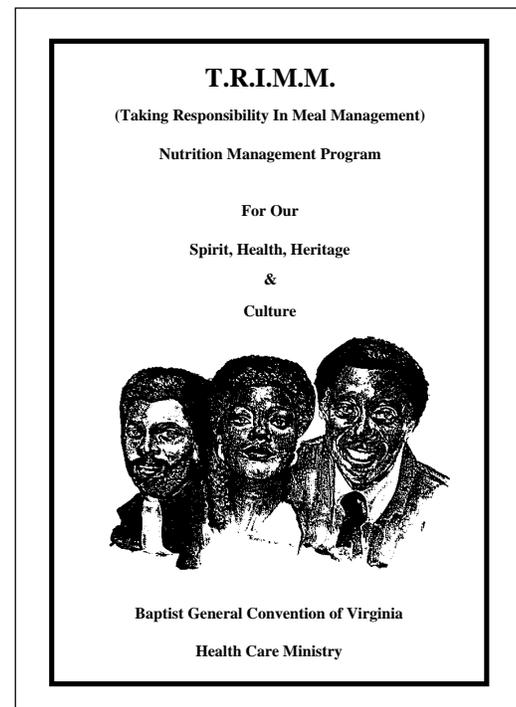
to participate in the group leader trainings, it was hard to get church members to attend the classes. The volunteers attributed the problem to the employment of many church members in the tobacco industry. Because these persons perceived the program as a threat to their livelihood, many pastors were resistant to the program. However, the group leaders conducted 16 courses for 115 participants. Sixty-eight of these smokers completed the course, and 26 (22.6 percent) were not smoking at the end of the course. To increase participation, local health department clinics offered classes away from the church, which provided greater confidentiality. The group leaders also offered self-help information as an alternative to group classes.

The BGC-HCM director convened a group consisting of regional coordinators, a member of the clergy, church volunteers, and VDH staff to select suitable nutrition and weight loss management programs for the project. The group reviewed existing programs and selected a locally developed program called TRIM. The group revised the TRIM materials and gave the program

a new name because the old title was not an acronym for anything. The project staff felt that the program would have more meaning if the letters represented a relevant message—i.e., Taking Responsibility in Meal Management (TRIMM). The working group also selected an appropriate exercise video to complement TRIMM.

The BGC-HCM director and the VDH nutrition education coordinator conducted the first TRIMM training session for regional coordinators and assistants. Shortly before the end of the project, regional coordinators began training local volunteers to lead TRIMM classes. So far, the volunteer leaders have conducted three TRIMM classes with 100 participants. Twenty-two of the 100 participants lost weight.

The VDH and the BGC-HCM continue to implement all phases of the project since the conclusion of their Stroke Belt Initiative funding in September 1995. ■



Summary: Lessons Learned

The Stroke Belt Initiative projects demonstrated the capability of State health departments to plan and carry out health education interventions to prevent and control risk factors for stroke and heart disease. They also provided some valuable lessons that others can use in planning intervention programs for use in the Stroke Belt and elsewhere.

Several of the projects worked with churches, and the many lessons learned from their experiences will add to the knowledge base on how to work with churches to implement health education programs to prevent and control risk factors for stroke. They succeeded in recruiting churches, training teams among the congregations to implement program activities, moving the teams to action, and sustaining their actions over time. Some lessons learned are described below.

- It takes time to organize and carry out health programs in churches, but patience is rewarded. In some churches, it can take 10 months or more from the first contact with the church to the time of the first program event. Analysis of the combined data from 21 churches in Louisiana and Tennessee showed that it took an average of 44.9 weeks (10.5 months) from the first contact with the church to the time of the first program event. It took an average of 6.4 weeks (1.5 months) from the initial contact with the church to the point when the pastor committed the church to participate. It took another 15.6 weeks (3.6 months) from the commitment to participate to the appointment and training of the church team. The first program event took place, on average, 20.7 weeks (4.8 months) after training the church team. Health professionals must realize that this is normal and not give up.
- There is no single best way to recruit churches and sustain their participation. Each church-based project used different approaches.
- Support from the clergy is essential. The clergy usually decides whether the church will participate or not. The level of support for the project by the clergy also determines the priority that it receives in the church.
- The appointment of the right person as coordinator of the health care ministry or team is critical to keeping the members motivated and committed to the screenings and other activities in the churches. HCMs with strong coordinators tended to maintain a consistent flow of program activities whereas those with weak leaders held activities much less frequently. Thus, it is very important to select a strong coordinator in the beginning because the clergy is generally unwilling to replace an ineffective coordinator.
- Church teams or HCMs can be very creative in devising ways to communicate health messages to their congregations. Examples seen by the Stroke Belt Initiative projects included plays during services, healthful cooking demonstrations, “Gospelize” (exercising to church music), and letters from young people urging significant adults to quit smoking. Project staff should encourage this creativity.
- Scheduling training sessions for church teams or HCMs is often a challenge. Cancellations are frequent. The project staff must maintain patience and flexibility and work with the HCM to reschedule the training.

Other major lessons learned:

- It takes time to build coalitions that will plan and carry out programs to prevent and control risk factors in their communities.
- Smoking intervention by nurses and health educators with low-income smokers in health department clinics produces respectable quit rates.
- Automated blood pressure measurement machines can make a valuable contribution to the hypertension detection and control efforts in rural and low-income communities.

It is hoped that the life and impact of many of these projects will live well beyond the funding. ■

CHES Continuing Education Quiz

The National Heart, Lung, and Blood Institute (NHLBI) has reviewed and approved this report on the Stroke Belt Initiative for continuing education credits in health education.

A certified health education specialist (CHES) may receive 2 credit hours in category 1. To receive credit, answer all of the following questions after reading this special issue. Circle the appropriate letter for each question on the answer sheet following the questions. Mail the completed answer sheet to:

Glen Bennett, MPH, CHES
National Heart, Lung, and Blood Institute
31 Center Drive, MSC 2480
Bethesda, MD 20824-2480

If at least eight of your answers are correct, you will receive a certificate indicating 2 credit hours in category 1.

- Which Stroke Belt State used quality assurance audits to improve the quality of care given to low-income patients with hypertension in health department clinics?
 - Alabama
 - Georgia
 - Indiana
 - Kentucky
 - North Carolina
- Churches affiliated with the Baptist General Convention were the focus in which Stroke Belt State?
 - Louisiana
 - North Carolina
 - South Carolina
 - Tennessee
 - Virginia
- The Stroke Belt Initiative project in Mississippi used automated blood pressure measuring machines to record more than _____ blood pressures in six counties.
 - 10,000
 - 50,000
 - 100,000
 - 150,000
 - 200,000
- Which State has the highest age-adjusted stroke death rate?
 - Florida
 - Georgia
 - Indiana
 - North Carolina
 - South Carolina
- Which one of the following Stroke Belt States did NOT target any of its activities to churches?
 - Kentucky
 - Louisiana
 - South Carolina
 - Tennessee
 - Virginia
- Health educators working with low-income smokers in two Indianapolis health centers achieved a 6-month quit rate of:
 - 3 percent
 - 5 percent
 - 12 percent
 - 15 percent
 - 20 percent
- On average, about how long did it take from the time the clergy committed the church to participate until the first program activity in the church?
 - 1 month
 - 3 months
 - 6 months
 - 9 months
 - 1 year
- When did epidemiologists first document the higher stroke death rate in the southeastern United States?
 - 1940s
 - 1950s
 - 1960s
 - 1970s
 - 1980s
- Which Stroke Belt State organized a poster contest among high school students and used the winning posters in public service announcements?
 - Arkansas
 - Georgia
 - Indiana
 - North Carolina
 - Tennessee
- Which Stroke Belt State attempted to set up planning groups or a coalition in each of the 10 counties to plan and carry out stroke risk reduction activities?
 - Arkansas
 - Georgia
 - Indiana
 - North Carolina
 - Tennessee

NHLBI Stroke Belt Initiative

CHES Continuing Education Self-Study Answer Sheet

NCHEC Provider No.: MD0013

Event No.: 01015

Circle the correct answer to each question and mail this answer sheet to:

Glen Bennett, MPH, CHES
 National Heart, Lung, and Blood Institute
 31 Center Drive, MSC 2480
 Bethesda, MD 20824-2480

(Please print or type)

Name _____ Degree(s) _____

Title _____ CHES No. _____

Agency _____

Address _____

City _____ State _____ Zip _____

Telephone _____ Fax _____

Internet Address _____

Please circle the letter of the correct answer for each question.

- | | | | |
|--------------|--------------|--------------|---------------|
| 1. a b c d e | 4. a b c d e | 7. a b c d e | 10. a b c d e |
| 2. a b c d e | 5. a b c d e | 8. a b c d e | |
| 3. a b c d e | 6. a b c d e | 9. a b c d e | |

Does the information in this report on the Stroke Belt Initiative projects:

		Agree		Disagree	
1. Show evidence of competence in carrying out planned educational programs?	1	2	3	4	5
2. Show evidence that program planners selected methods and media best suited to implement program plans for specific learners?	1	2	3	4	5
3. Interpret results of program evaluation?	1	2	3	4	5
4. Infer implication from findings for future program planning?	1	2	3	4	5

Date _____ Signature: _____

CHES No. _____