

Appalachia: Two Approaches In Student Summer Health Projects

White Oak, Tennessee. National concern for the economic backwardness of Appalachia began during John Kennedy's 1960 Presidential campaign and led to the establishment in 1965 of the Appalachian Regional Commission (ARC). In turn, ARC grant money and a wave of social awareness sweeping through university campuses have generated a number of social service projects in Appalachia. Two student health projects with sharply differing approaches are the Student American Medical Association (SAMA) program, where medical students are assigned to local physician "preceptors" throughout the 13 Appalachian states, and the smaller, less Establishment-oriented Vanderbilt group, whose series of "health fairs" in different eastern Tennessee communities are providing free multiphasic screening.

The Coal Economy

For 10 days, this reporter traveled through eastern Kentucky and Tennessee—the core of Appalachia—primarily observing the SAMA and Vanderbilt programs. The Vanderbilt group spent 1 week in White Oak, Tennessee, an unincorporated township not found on most Tennessee maps and more or less typical of the communities which the project serves.

White Oak's economy was largely based on coal until recently when most mine operators preferred to close down rather than to meet the more stringent regulations of the new Coal Mine Safety Act. Most older miners remaining in White Oak are now unemployed and have gone on welfare. Younger men seeking jobs were forced to look for work at the factories in cities such as Cincinnati.

The coal industry's decline in White Oak, however, has its brighter side. Illegally overloaded coal trucks have gouged the winding treacherous roads, and strip mining operations have devastated whole hillsides and polluted wells with sulfuric acid. The deep mines have taken a serious toll in hu-

man health. Most men who have worked in these deep mines for more than 10 years have serious respiratory ailments, and many are eligible for Black Lung benefits.

In Jellico, which is a 20-minute drive from White Oak, there are two hospitals. One is a shabby, wooden structure but the other, which has never opened, is a modern well-equipped facility. This latter hospital, built with Hill-Burton funds, has never opened because Jellico, like most of Appalachia, has not been able to attract enough health professionals. The situation in White Oak and Jellico, if not typical, at least symbolizes the problems of inadequate health care in Appalachia.

The SAMA and Vanderbilt summer programs are both aimed at providing better health care to Appalachia. SAMA's long-range objective is to interest health science students, especially medical students, in coming to Appalachia to practice after their internships and residencies. The SAMA organization, strongest of the student groups in the health sciences, is running this year's program on a 1-year \$274,000 ARC grant and on a small grant from the American Pharmaceutical Association which supports 14 pharmacy students. Now in SAMA's second year, there are 141 medical, nursing, pharmacy, and dental students through 12 of the 13 Appalachian states, and each student is assigned to a local preceptor who can introduce him to community officials and "legitimize" him in their eyes.

Experiences with the local physician preceptor vary greatly. Some physicians let their students, most of whom are to begin the second and third year at medical school, take histories, give physicals, and even deliver babies under supervision. Other physicians want their students just to look, not to touch.

Among the SAMA preceptors, Dr. Paul Maddox is unique. He has received national publicity for his Medicaid receipts, which were \$106,112 in 1969.

Maddox relies heavily on paraprofessionals and does not make house calls, in contrast to most local physicians who spend many valuable hours each day on the slow mountain roads. Consequently, Maddox and one partner treat as many as 270 patients daily in Maddox's new \$140,000 Campton, Kentucky, clinic.

More typically, physicians in Appalachia do not utilize paraprofessionals as efficiently as Maddox. The school physician for Harlan County, Kentucky, according to one local health official in Harlan, permits his registered nurses at the schools only to prescribe aspirin and serve coffee. Many doctors still spend much of their day making house calls. In Jackson, Kentucky, a physician new to the area tried to institute a "no house call" policy and got so few patients that he left town.

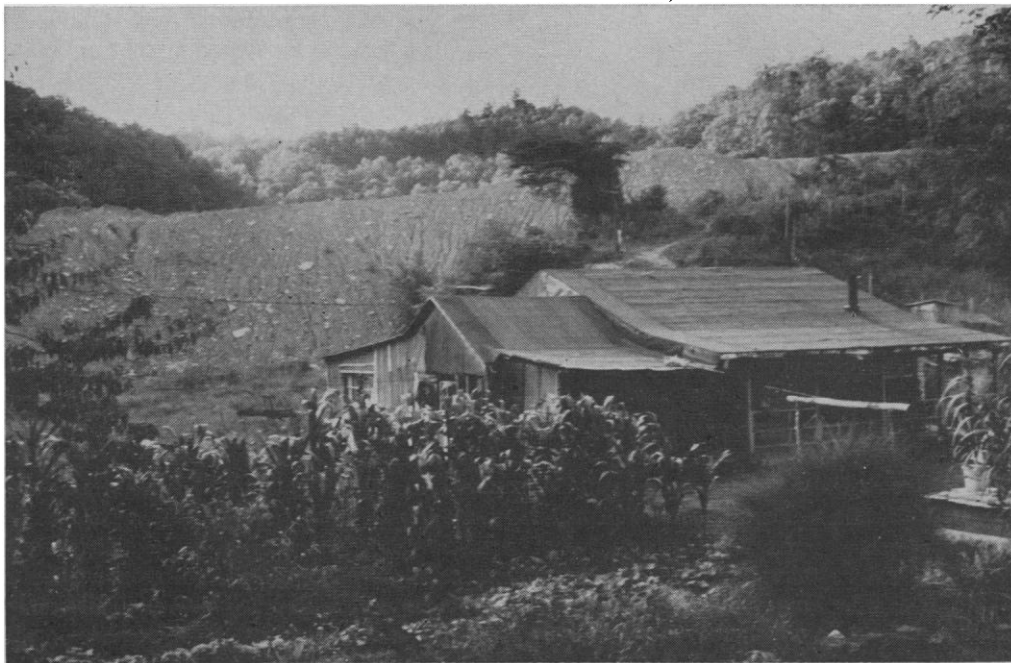
SAMA Schedules Vary

SAMA students are advised to spend 2 days a week with their local preceptors, 2 days a week talking to community officials, and 1 day a week working on special projects, such as that of Maddox's student, Robert Cooper, who spends many hours each week talking to Wolf County officials, trying to persuade them to set up a public ambulance service. Cooper is also overseeing negotiations between the two Campton funeral directors, who provide ambulance services but are losing money. He hopes that they will not phase out their ambulance businesses until a public ambulance service is set up. Because SAMA is structured so that each student will "do his own thing," this means that, at a given moment, a student may be riding an ambulance, talking to a local politician, working closely with his physician preceptor, or picnicking in the Appalachian hills.

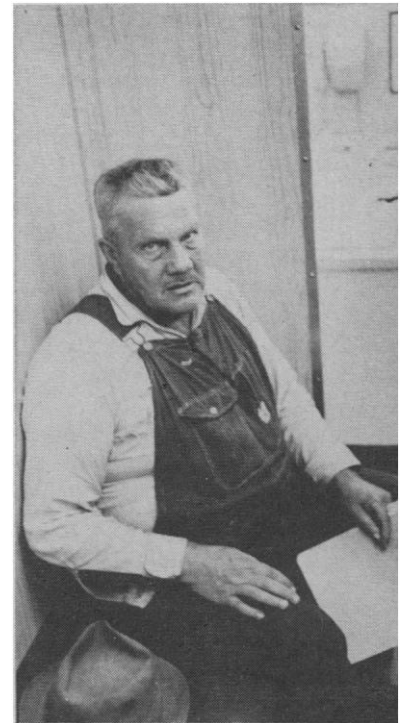
Those in the SAMA program are given specific instructions not to antagonize the local medical establishment and, therefore, the student is supposed to observe, not to innovate. Dr. Joseph B. Deisher, the host physician coordinator, wrote to the local physician preceptors, "They [SAMA students] have been cautioned that their purpose is NOT to make changes (the time is much too short to even understand what might need changing, if anything)."

The 2 days a week that SAMA students spend talking with community officials gives them some idea of the scope of the problems in Appalachia. But the school, court, and public health

Health Fairs in Eastern Tennessee



Strip mining spoil bank looms behind White Oak home.



Clon LeMar (above right), a 63-year-old resident of White Oak, waits inside an air-conditioned TVA van where he will soon undergo pulmonary function studies, get a chest x-ray, electrocardiogram, and audiogram, and will have some blood drawn for testing.

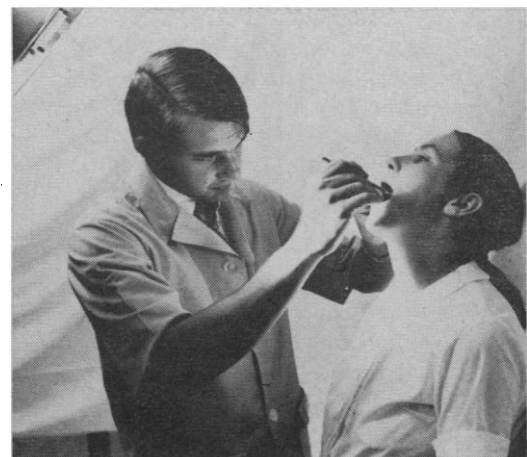


A Vanderbilt nursing student (left), who just finished a 4-year B.S.-R.N. program, gives a tuberculosis test to a White Oak child.

Photographs by Samuel Z. Goldhaber



White Oak residents take their neighbors' medical histories.



Local dentist volunteers for health fair.

officials whom SAMA students approach are often the same ones that the Vanderbilt group, which emphasizes grass-roots participation, holds in contempt for not really caring about poor people.

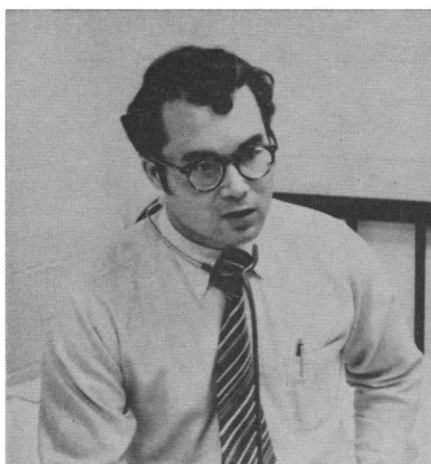
W. Grady Stumbo, a fourth-year medical student and program director for SAMA, explained SAMA's desire to avoid rocking the boat. "We're part of the system," Stumbo told *Science*. "Health care has always been in the professional community and it is going to stay there."

The Vanderbilt project, formulated by two Vanderbilt Medical School students, is now in its first summer. The group consists of roughly 15 Vanderbilt undergraduates, six nursing students, seven nurses who have just finished Vanderbilt's 4-year program which confers the degrees of B.S. and R.N. at the same time, eight law students, and eight medical students, who are staging eight health fairs, each of which lasts 1 week. The Tennessee Valley Authority (TVA) has lent two medical trailer units and about eight of the TVA personnel for the summer. The larger TVA van has equipment for x-rays, electrocardiograms, blood tests, audiograms, and pulmonary function studies. The smaller van is used to give adult male physical examinations.

Field Workers Follow Up

The Vanderbilt group is divided approximately in half between field workers, who are for the most part undergraduates and nursing students, and those traveling with the mobile units. Field workers are assigned to teams of at least two in each community for the whole summer. In the towns, they set up or work with community groups to lay the groundwork for the health fair. This involves both recruiting available health professionals who will volunteer from the community or surrounding area, and working on publicity, food arrangements, and housing arrangements. After the health fair is over, the field workers assist in the necessary follow-up work. The law students, most of them field workers, show local residents how, for example, to get Medicaid and Black Lung benefits.

An exciting, aggressive atmosphere pervades the Vanderbilt group. The students work hard giving physicals during the day and processing patients' charts at night. Every weekend, the field workers and members of the mobile units coordinate their efforts as they camp at Tennessee state parks.



Robert Cooper, SAMA medical student.

After the tensions of a hard week's work, the group savors the weekend for various activities, including singing, drinking, and swimming together, as well as reviewing the week's work.

George Maxwell, one of the two Vanderbilt medical students who organized the project, revealed that besides a \$32,600 ARC grant, the group scraped up an additional \$54,600 from five other sources; the Field Foundation, the New World Foundation, the Macy Foundation, the Regional Medical Program, and a summer stipend for three undergraduate students from Vanderbilt University.

Ginny Solomons, who just finished Vanderbilt's 4-year B.S.-R.N. program, said, "We went through a traumatic period when we didn't know whether we'd get funded. It came to a point when we said, 'Hell, we'll do it anyway,' because we became so excited." Their occasional midnight requisition parties have yielded free medical supplies. A wheelchair stamped "Vanderbilt University Hospital" is evidence of the "Beg, borrow, or steal" philosophy to which the group subscribes.

The Vanderbilt students have been well received by the communities where they have worked. In addition to housing the field workers who stay in their towns for the whole summer, residents of these towns have taken in many of the students with the mobile unit during the week of the fair. The fairs use community people to take histories, test eyesight, measure height, weight, and blood pressure. Some local men contribute by providing transportation. Clon LeMar, a 63-year-old resident of White Oak, said, "I enjoyed so much hauling the people back and forth. I hate to see these people leave."

The Vanderbilt physicals are very

thorough. Children are immunized against diphtheria, whooping cough, and tetanus and are tested for tuberculosis and histoplasmosis. Blood samples are analyzed for cell counts, hemoglobin, inorganic components, and venereal disease. Pulmonary function studies are done on miners. Women are given Pap smears to test for cancer, and everyone over 21 is given a chest x-ray and an electrocardiogram.

TVA personnel, like the local residents, have good relations with the Vanderbilt group. James B. Pulliam, chief of the TVA mobile units, indicated that he and the other TVA men do not mind the strain of working overtime and processing many more people than they would during a regular work day. He commented, "I've never seen people more enthusiastic than those in this group, and it's a pleasure to be with them. They are doing a heck of a lot more than they could in school."

Learning to Give Physicals

During the school term last spring, Vanderbilt nursing students did extra studying to learn how to give physicals. They received further training during the project's 3-week orientation program and now give complete pediatric and, at times, adult physicals. Although the mobile unit screens about 750 people each week, there is only one physician, Dr. Joseph Moss, who is with the unit for the whole summer. Moss just completed his pediatrics residency at the Vanderbilt University Hospital. To increase the project's medical manpower, the group recruits Vanderbilt faculty members and local physicians, nurses, and dentists to visit and help out with the project.

William Dow, a fourth-year medical student and one of the project's two organizers, emphasized the strong community support which allows his group to do what it wants. He told *Science*, "We caught a lot from people [certain physicians and officials] for permitting nurses to give physical examinations, but the groundwork we did in the community paid off. No one can touch us."

Dow pointed out that Vanderbilt University refused to sign all but one grant contract and that, for a sponsor, he had to rely on Dr. Amos Christie, retired chairman of the Vanderbilt pediatrics department. "Nevertheless," Dow said, "it's worth dragging all those people up here [Vanderbilt faculty members]" to interest them in the proj-

ect and the problems of the Appalachian communities.

At one of the Sunday camping meetings, which are exercises in self-examination, project member Rod Lorenz, who had spent the previous week at the Vanderbilt University School of Medicine, offered a thoughtful critique of the project. He said, "In some ways, we're practicing sloppy medicine. Our gowns are not laundered; hands are not washed between patients; the sheets are not changed between patients; we don't smell nice. We have sometimes made contemptuous and rude remarks about the faculty and the university [because of their lack of cooperation]. These comments get back. We have to have the medical faculty on our side." The medical students resolved immediately to use disposable gloves when examining patients and to change the gloves between examinations. The group as a whole resolved to hold back from verbalizing its resentment against the university.

When the Vanderbilt group had a health fair near the town where two SAMA medical students were located, the SAMA students dropped their regular schedules to join the Vanderbilt group. The two SAMA students became so excited about the Vanderbilt project that they spent most of the next 3 weeks traveling and working with the group.

In evaluating these two projects, the personal biases of this reporter will undoubtedly make some difference. In Tennessee, it was possible to spend 2 working days and a weekend living with the Vanderbilt group and examining every facet of their program. The Vanderbilt experience often made one want to participate rather than just observe. On the other hand, it was feasible to visit no more than ten people connected with the SAMA program because the 141 SAMA students are geographically so widespread.

The SAMA program is really 141 independent projects. It is a difficult program to assess because so much of the student's experience depends on his own initiative and on his preceptor. SAMA's most important goal is to attract future physicians and other health professionals to practice in Appalachia. At present, it does not seem likely that SAMA alumni will swarm back to Appalachia. Even though one-fifth of last year's SAMA students said at their debriefing that they might return to Appalachia (a very encouraging statistic), the enthusiasm of some will certainly wane.

Others who still want to return may find that their wives will prefer a less isolated life. C. H. McKee, a SAMA dental student based in Harlan, Kentucky, made a typical comment: "This is a professional Utopia. You can do as much as you want with no limitations. But as far as my family, I can't see putting them through it. Every weekend we escape to Kentucky's fabulous state parks but you can't live in the state parks forever."

Critics of the SAMA program, both within and outside of the ARC, assert that the ARC supports many SAMA students who experience nothing more than a "nice summer." They say that if the program is to have any chance for success, that it should take students almost exclusively from Appalachia. The problem, however, is that there are comparatively few students born in Appalachia who will become health professionals and that some of these are intent on practicing in an urban setting.

The Vanderbilt project, unlike SAMA, seems to be meeting its primary goal: working with grass roots organizations to plan a week of free comprehensive physical examinations. By the end of the summer, more than 6000 Appalachian residents, many of them children, will have benefited from the Vanderbilt effort.

The results of most lab tests are sent back to the field workers within a week or two after each health fair. The field workers then give priority to contacting and making treatment available to those patients with acute illnesses. In any one community, the names of those individuals who are acutely ill will be learned within a few weeks, and an effort will be made to get Medicaid to finance their hospital costs. A computerized statistical analysis on all patients' charts, with totals and cross tabulations, will not be available until late September.

Even without an extensive array of numbers, the accomplishments of the Vanderbilt group are evident. For example, children are being taught how to brush their teeth and are given free toothbrushes and toothpaste. Miners get help in applying for Black Lung benefits if TVA x-rays show that they qualify. Vanderbilt field workers make sure that at least those with the more serious ailments receive proper medical follow-up. But perhaps most important, the Vanderbilt field workers are strengthening eight community health organizations so that residents have in-

creased confidence in fending for themselves.

In White Oak, for example, the local residents have formed a group which has obtained a commitment for a free, prefabricated clinic. Of course, White Oak is likely to have the same problem that plagues Jellico—lack of health manpower.

What the Vanderbilt group accomplishes for eastern Tennessee health care over the long run is still uncertain. Most Vanderbilt medical and nursing students, when asked whether they will return to practice in Appalachia, reply, "Who knows?" Nevertheless, for those interested in improving rural health care anywhere, the Vanderbilt group should provide a helpful model. In addition to Vanderbilt students' having created a program to which they are obviously deeply committed, the residents of eight eastern Tennessee communities will be more conscious of the importance of adequate health care and will be better organized to pursue their needs.—SAMUEL Z. GOLDBER

RECENT DEATHS

Erwin H. Amick, 59; chairman, chemical engineering department, Columbia University; 9 July.

William J. Bowen, 58; chief, bioenergetics section, biophysical chemistry laboratory, National Institute of Arthritis and Metabolic Diseases, NIH; 28 July.

Thomas F. Bridgland, Jr., 43; professor of mathematics, Drexel University; 17 July.

Felton G. Clark, 66; former president of Southern University; 5 July.

Edward R. Collier, 75; former professor of social sciences, Boston University; 2 July.

W. Marshall Denison, 35; president, John Tyler Community College; 26 July.

Harris Fahnestock, 64; assistant director, Lincoln Laboratory, Massachusetts Institute of Technology; 26 July.

Richard Ford, 55; Massachusetts state pathologist; 3 August.

Jesse W. Fox, 63; chairman, chemistry department, Memphis State University; 8 July.

Louis C. Graton, 90; professor emeritus of mining geology, Harvard University; 22 July.

William E. Ham, 53; professor of geology, University of Oklahoma; 10 July.