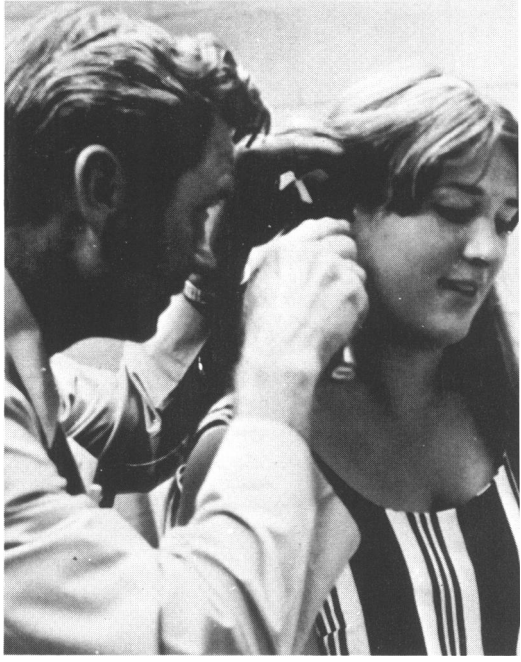

RICHARD A. HENRY, MD

Use of Physician's Assistants in Gilchrist County, Florida

Too much is good in medicine today to risk losing it by ignoring the health needs of certain segments of our population. The signs are all about us. The trend has been toward increasingly vocal populations, with less than optimal health care, speaking to responsive legislators who are in danger of damaging what is good in medicine through emotional legislation.

The United States has 134 counties without physicians (*1*). Fifty-five million people (27 percent of the U.S. population) live in rural communities of less than 2,500 population where health care delivery is either inadequate or essentially nonexistent (*2*).

Florida is no exception in the national situation. There are communities, primarily rural, where ambulatory health care is not readily available. Some have no physicians while others have too few. Florida, as a whole, enjoys a physician-to-patient population ratio of 1:760, but 29 of the State's 67 counties have a ratio of 1:2800. These 29 counties are rural, and the population of each ranges from 2,700 to 19,000. Four of the 29 counties are without physicians.

The program in Trenton, the county seat of Gilchrist County, Fla., has as its goal a study of the provision of quality health care to an underserved population by using physician's assistants, directed and supervised by licensed medical physicians. In this report after 6 months of activity, their use in Trenton and Gilchrist County, both rural and physicianless, is described.

The county population including demographic and sociomedical data, the results of clinic activities, and physician participation are also briefly described. Acceptance of physician's assistants by physicians and the recipients of care is being measured, and preliminary data concerning these factors are reported.

The concept, training, and use of physician's assistants has been demonstrated to be feasible and productive in extending the physicians' capabilities (*3,4*). No long-term studies of use are available, but the evidence, so far, points toward the conclusion that they will have a favorable influence on the delivery of health care, under the responsible supervision of a physician.

Somehow, when health manpower is being discussed, there is a tendency to sum up the combined productivity of the physician and the assistant. This sum is then presented as a proposed answer to maldistribution. But physicians do not reside in these underserved areas; therefore the physician's assistant, functioning in a physician-dependent capacity has not been adequately evalu-

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ated as a potentially acceptable purveyor of health care in these underserved areas.

This study was planned and implemented in 1971 to evaluate the impact of physician's assistants in the delivery of primary health care in a physicianless community. So that such a system of health care would be meaningful, the following requirements were thought to be essential for acceptance in replication:

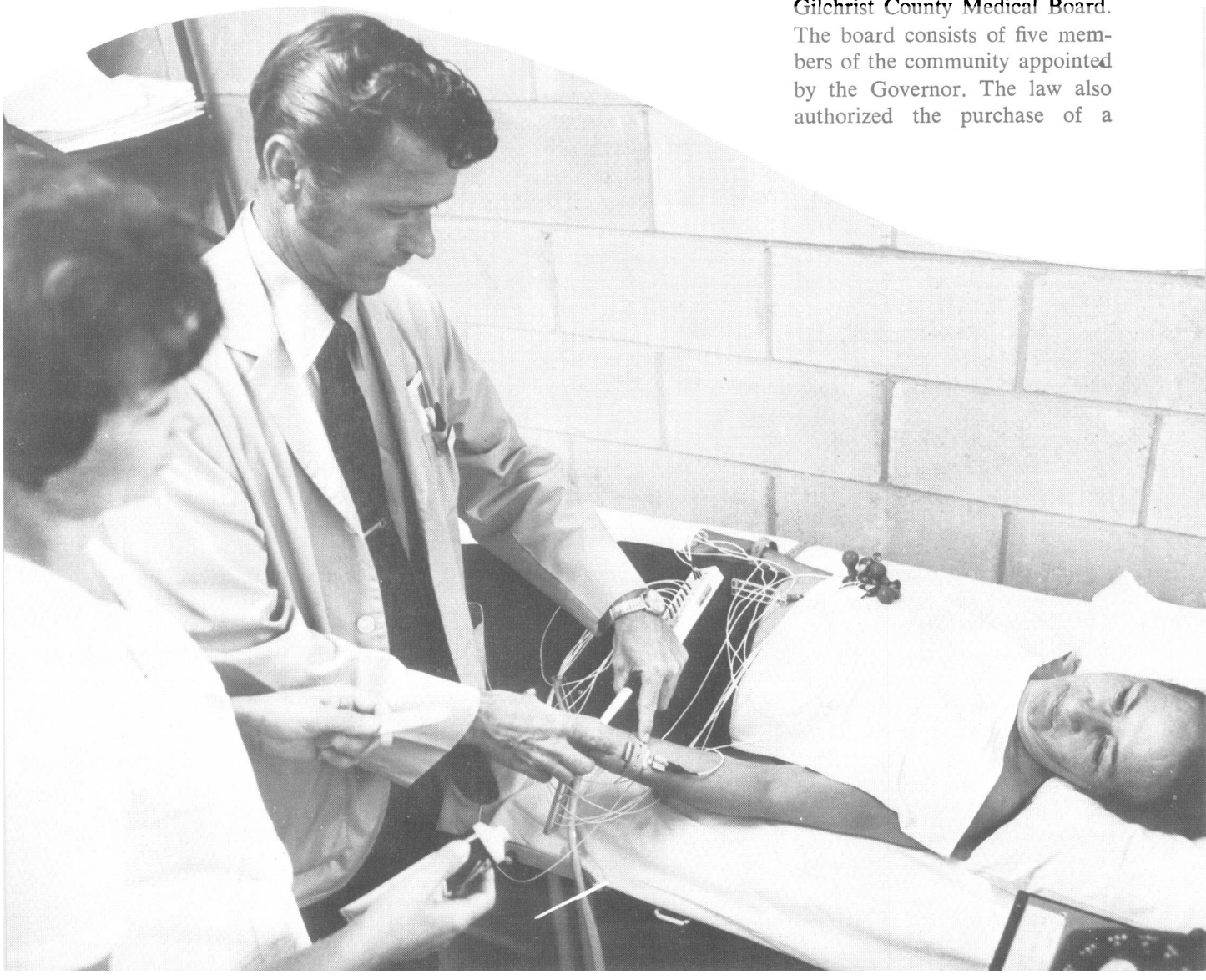
1. Physician supervision must be part time
2. Quality of health care must be maintained
3. The population being served must voluntarily accept the system and be comfortable in encounters with the assistant
4. The physician's assistant must like working in the system and be attracted to the area where he works.

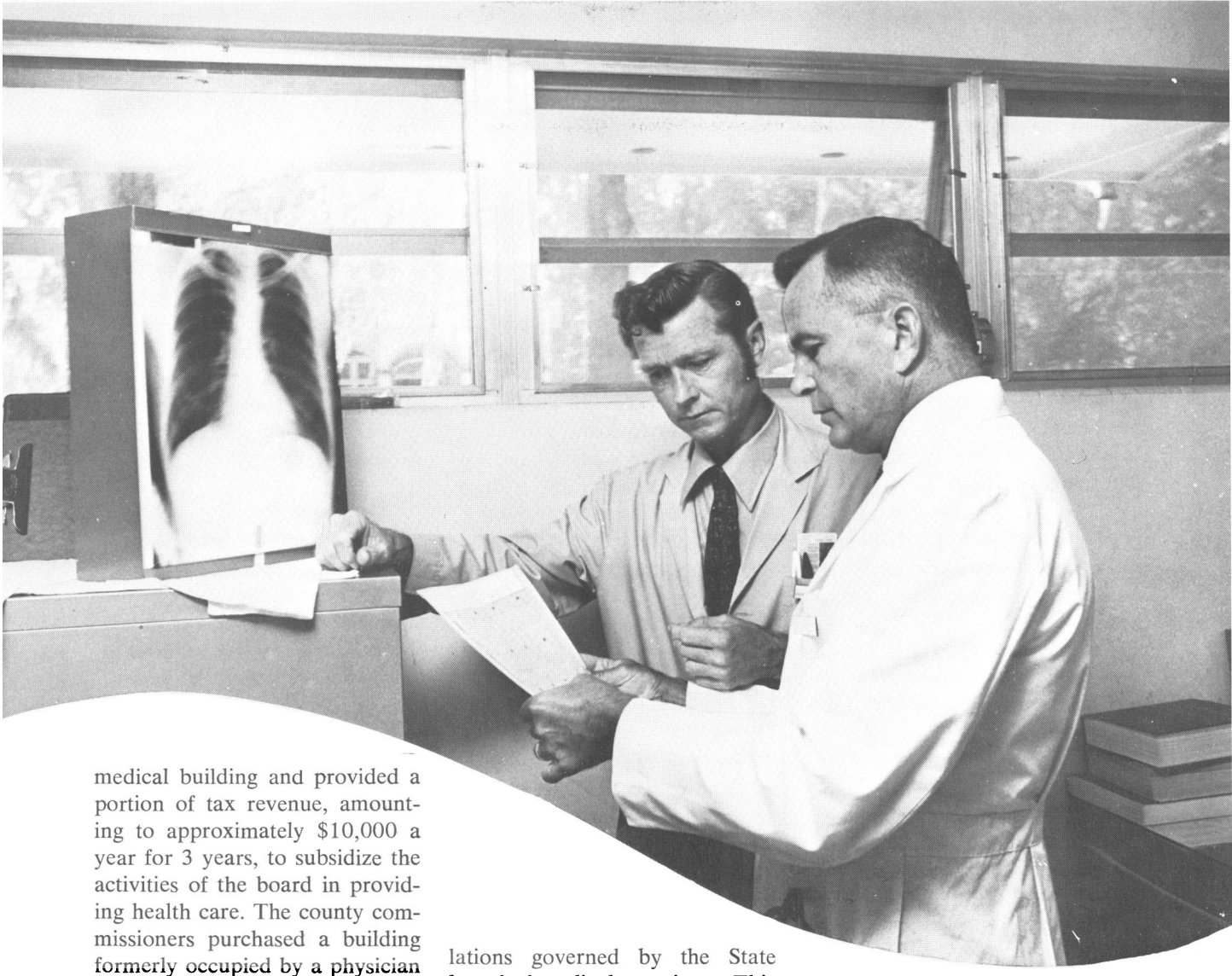
Background Data

The study site. Gilchrist County, 30 miles west of Gainesville, where the University of Florida College of Medicine is located, has a population of 3,550 persons. The economic base is agricultural, with no other industry. Per capita income is $1,500. Florida's per capita income is $2,600.

For the past 4 years the county has had no practicing physician, and a committee from the Rotary Club in Trenton was appointed 2 years ago for the purpose of recruiting a general practitioner to the area. Because the members were unsuccessful in finding candidates and because the future prospects of recruiting a physician were poor, the committee initiated discussions in the fall of 1970 with the university's department of community health and family medicine for the purpose of exploring feasible ways of resolving the situation.

State Representative Howell Lancaster (now deceased) had introduced a "local" bill into the State Legislature, which was passed in July 1971, creating the Gilchrist County Medical Board. The board consists of five members of the community appointed by the Governor. The law also authorized the purchase of a





medical building and provided a portion of tax revenue, amounting to approximately $10,000 a year for 3 years, to subsidize the activities of the board in providing health care. The county commissioners purchased a building formerly occupied by a physician and authorized the expenditure of $5,000 for medical supplies and equipment.

The members of the medical board serve staggered terms and receive no compensation for services. The duty of the board is to set policies and regulations relating to the total administrative aspects of the program, including the collection of fees and the disbursement of funds. Fees are collected for services according to the Florida Medical Association's relative value scale. In 1971 the charge for an office call was $6.

Another bill that became law in the 1971 State Legislature authorized the employment of physician's assistants under regulations governed by the State board of medical examiners. This body approved the employment of two graduate physician's assistants for the study program.

Organization of Clinic

Clinic staff. Two physician's assistants manned the clinic staff from September 1971 through January 1972, when one left because of a personal problem. A receptionist-bookkeeper and a licensed practical nurse, both residents of Gilchrist County, also were employed.

Salaries of the physician's assistants have been paid with funds from the university's department of community health and family medicine, under a supportive grant by the Commonwealth and Carnegie Foundations. It was anticipated that clinic revenue would support these salaries during the first year of operation when the patient load increased and all facilities were installed.

Clinic revenue was sufficient to cover salaries of the receptionist and the nurse, as well as regular office expenses during the 6-month period from August 16, 1971, the opening date of the clinic, through February 1972. Income was $10,800 and expenses, $7,800.

Physical plant, equipment, and procedures. The clinic, across the street from the courthouse in Trenton, is a masonry and redwood one-story building, with 1,400 square feet of floor space.

It is in excellent condition. Members of the Rotary Club cleaned and repainted the structure before it was occupied.

The medical board authorized the purchase of an X-ray machine and an incubator for office bacteriology. Minor laboratory procedures, such as urinalysis, complete blood count, and hematocrit, have been performed by the physician's assistant or the nurse. Specimens for other laboratory tests were mailed to a clinical laboratory.

An electrocardiograph, rented from the College of Medicine's division of cardiology, produces computer-read electrocardiograms through a telephone link. The electrocardiograms have been reviewed by the attending physicians. Members of the department of community health and family medicine supervise clinic activities daily. One member also has been available nights and weekends by telephone. These physicians are present from 2 to 4 hours daily for vis-a-vis consultations with patients, discussions with the physician's assistant or staff regarding policies or procedures, and to review and comment on every patient's record.

Patients usually visit the clinic by appointment, where the staff obtains demographic data and completes a personal history. Only patients from Gilchrist County are seen, except for emergency cases. The physician's assistants have alternated on night and weekend emergency calls.

The physician's assistant takes histories, performs the indicated physical examination and laboratory or X-ray procedures, and either treats the condition or asks the attending physician also to see the patient. If the physician is not present, and a consultation is needed, he is called on the telephone.

In the event the patient requires referral for hospitalization or for diagnostic or therapeutic procedures beyond the competence of the working personnel, the patient is asked to name the facility or physician he prefers, and proper referral, with the necessary records, is effected.

Many people of Gilchrist County, having been without a physician for 4 years, have established a relationship with a physician in a nearby county. Every effort has been made to encourage continuation of this liaison. Physicians identified by survey as being the most frequently used were invited to hear an explanation of the Trenton program and were asked for suggestions as to how the clinic could complement their efforts.

As patients have been treated at the clinic, certain procedures have been established by the attending physicians and recorded in a looseleaf folder kept at the clinic. This guideline is entitled "Standard Procedures." For instance, a patient with dysuria would have, in addition to an examination and a history, a complete urine test, culture and sensitivity studies, a stain, and the appropriate treatment. Outlines of the procedures to follow and the limitations of activities are stated in the guide.

A system of recordkeeping, essentially the Weed system of problem-oriented medical records, has been used (*5*). This system has been modified to some extent so that future clinic activities may be transmitted daily by teletype, stored in a computer, and retrieved in a monthly report. This information could be designed to report demographic data, frequency of illness and injuries, procedures and laboratory tests performed, treatments instituted, results of treatments, and a "tickler" system to flag incomplete investigations or therapy.

Because quality of health care is difficult to assess, such a recordkeeping system is essential. To demonstrate that quality of health care is being maintained by this approach to delivery, the records must be amenable to comparison with conventional methods of delivery.

Study Objectives

The university's first concern was to obtain baseline information about the population before beginning activities in the clinic. A survey was conducted in June and July 1971 by the department of sociology, University of Florida.

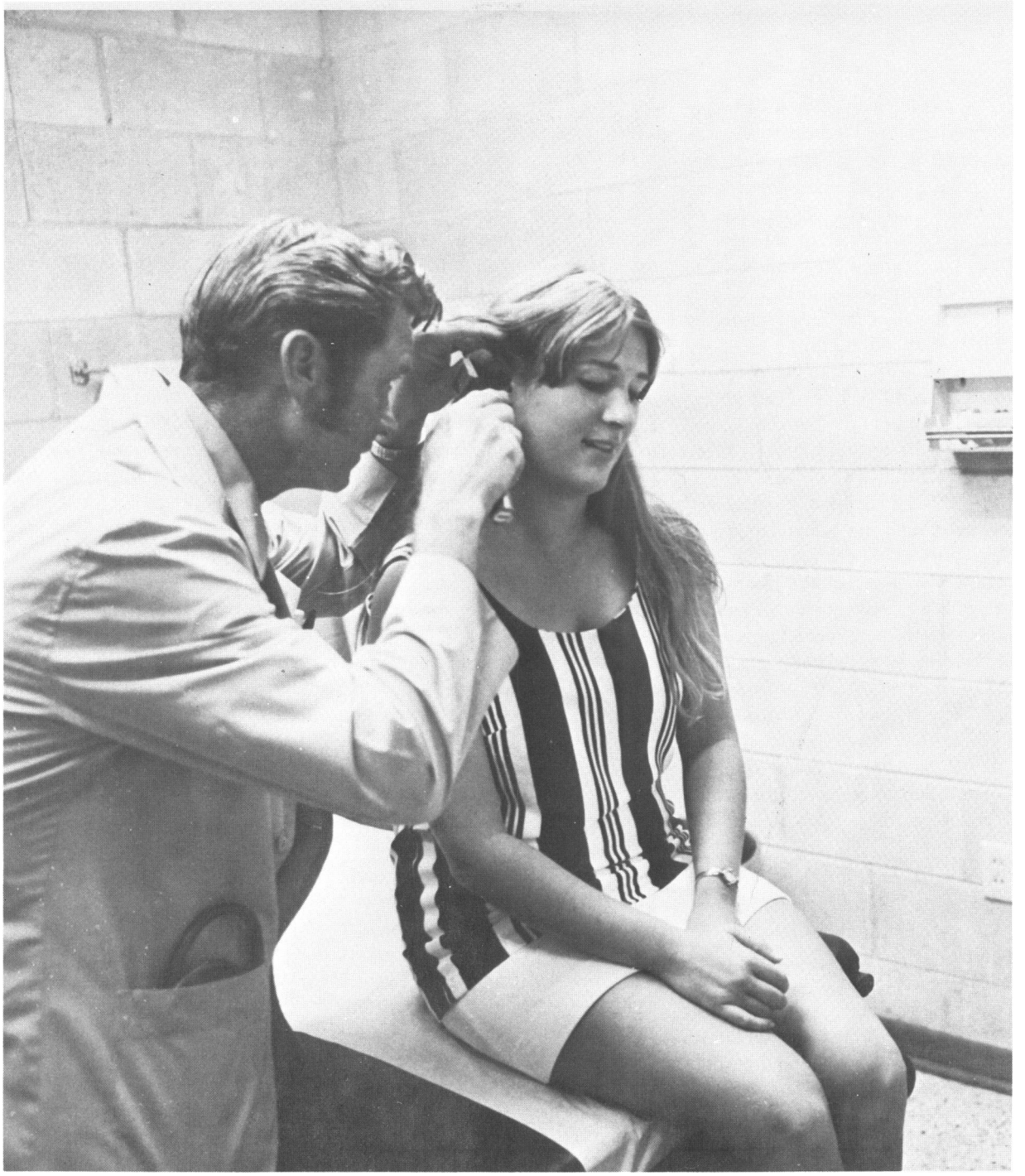
Trained interviewers conducted 40- to 60-minute interviews of 27 percent of the total county population by interviewing the female head of the households. Demographic data, health attitudes, patterns of health care, and costs of health care were obtained.

Results of Survey

The county has a stable, essentially agricultural-based, emigrating population. Two-thirds of the adults had less than a high school education, and more than two-thirds had lived in the county for more than 20 years.

The respondents' perception of their health was directly correlated with age and inversely related to income; 62 percent thought they had good or excellent health, 21 percent fair health, and 17 percent poor or very bad health.

In a similar study in Alachua County, where the university is located, only 4 percent reported



poor or very bad health to the identical question. A related question may account for some difference in the two counties: 29 percent of the respondents from Gilchrist County reported that they were not getting enough health care, and only 14 percent in Alachua County.

In a county with no physician, a rather high level of anxiety could be expected concerning the lack of emergency facilities and personnel. Documenting this concern, 29 percent of the respondents reported that they were worried often or all the time because of this lack of care. There was no correlation with age or income. This unmet expectation has important implications for everyone concerned with the delivery of health care and may, in fact, represent the greatest single need for rural underserved areas.

The 575 adult respondents identified a total of 57 physicians as the providers of their medical care; 37 percent identified general practitioners in three towns, 12 to 25 miles away. Most of the remainder reported physicians in Gainesville, 30 miles away.

A similar survey is to be conducted by the University in August 1972, 14 months after the original survey and 1 year after the clinic opened. Comparison of the data may reflect changes in the perceptions of health, patterns and cost of health care, and in the level of anxiety relating to emergency situations.

Clinic activities. Every report of a patient visit is reviewed by the attending physician and initialed by him before it is filed. In few instances have the attending physicians found it necessary to intervene in management of the patients' problems. On the contrary, the assistants frequently asked for comments and consultations when they needed only confirmation of their findings and a plan of therapy. The attending physicians have kept diaries in which they have recorded their day-to-day impressions of clinic operations and the consultations requested by the physician's assistants.

During the first 6 months of operation, 945 patients, representing 470 families, visited the clinic 1,705 times—averaging 14 visits per working day. The physician's assistants required consultation for 10 percent of these patients, either with the attending physician or the patient's physician. Another 10 percent of patient cases were discussed by the physician's assistants and the physician. Approximately 80 percent of the patients' visits were handled by the physician's assistants, and each record was reviewed by the attending physician.

The physician's assistants used the telephone sparingly to call the attending physicians, although they were always available. In the several instances that problems arose beyond the expected competence of the assistants, they referred the patient to a physician.

Acceptance by patients. The clinic had been in operation for 2½ months when we began sampling its users to determine their reaction to the clinic. After every fifth visit to the clinic, a questionnaire was mailed to the patient or parent of the patient 2 weeks after the patient's visit.

The results of this study indicate that 95 percent of the clinic users thought the service was competent, thorough, effective, and reasonable in cost. In response to a question relating to future use of the clinic, 85 percent, based on their experience, responded that they would return for regular care, and 15 percent said they would return for minor illnesses or injuries but would go elsewhere for some serious conditions. Although room was provided on each form for adverse responses, only one was received: a complaint about waiting too long to be seen.

The Florida Medical Association has provisionally approved the program, and its Medical Advisory Committee, which works with the University of Florida College of Medicine, has approved it as a study program.

Future Plans

In addition to ongoing studies of cost and of acceptance by patients, physicians, and physician's assistants, the department of community health and family medicine is beginning to implement a record system that may well become equal or superior to peer review.

The university has definite prospects of installing a television-audio link between the Trenton clinic and the College of Medicine in Gainesville. We envision these tools, a practical application of our technology, as being more than tools for the individual care of a sick patient. The link could be used for staff instruction, patient-group instruction, lay-group education, and for family, child, or individual counseling.

The results of this study may demonstrate the practicality of using physician's assistants in physicianless communities while maintaining quality care. In addition, favorable results from the study could demonstrate the practicality of employing a physician's assistant by a physician, the use of television and audio eqiupment by the physician who wants or needs frequent consultation concerning his patients, or as a means of using his private practice patients for continuing education.

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