

# NATIONAL SERVICE IN RURAL AREAS: THE CASE OF COLOMBIA<sup>1,2</sup>

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*Many countries in this Hemisphere and in other parts of the world now require a period of rural service after graduation from medical school. This paper examines the case of Colombia, presents a model developed from experience in Colombia and Kenya, and suggests ways in which the contribution of rural interns in Colombia might be improved.*

## Introduction

Many countries require a period of national service in rural areas for medical graduates. Kenya and Tanzania in Africa, Yugoslavia in Europe, and a majority of the Latin American countries have such a requirement. To help coordinate experience in this field, the Pan American Health Organization sponsored an international conference<sup>5</sup> on this subject in December 1974 (1); participants from 11 Latin American countries attended the meeting. Rising interest in the subject was also reflected in health manpower legislation considered by the United States Congress in 1974, which included a requirement that each U.S. medical graduate spend at least two years

performing national service in an underserved area (S. 3585, U.S. Senate). The rationale for such programs is clear: Rural areas are underserved and medical graduates owe society a debt for their education, which is partially subsidized in many cases. Therefore, it is felt that medical graduates should serve those areas most in need for some specified period of time.

The authors do not advocate establishing such a program. Whether or not to have one should obviously be decided by the particular country involved. All they are concerned with here are some of the ways optimum benefits can be obtained through rational planning, in accord with each country's needs, once the decision to adopt such a program has been made.

Colombia requires that every medical graduate serve a one-year "internship" in a rural area. In 1971, one of the authors (H. D. Banta) visited that country (2). In 1972, a visit to Kenya brought another model for organizing a rural internship to the authors' attention. In 1973 the authors visited Colombia together to learn from its experience and to examine that experience in terms of the Kenya model. This paper is the result of observations made on those three trips.

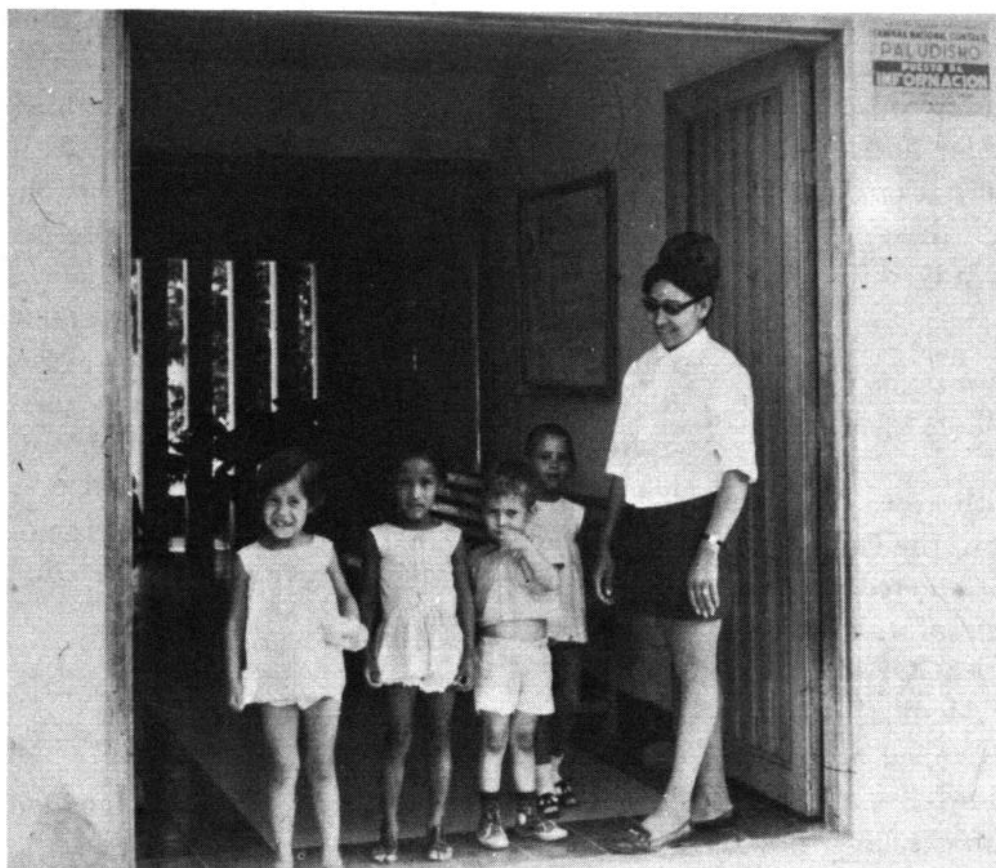
<sup>1</sup> Also appearing in Spanish in *Bol Of Sanit Panam* 81, 1976.

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<sup>5</sup> The First PAHO/WHO Meeting on Rural Service Programs in Latin America, which was held on 13-19 December 1974 at PAHO Headquarters in Washington, D.C.



*In Colombia all medical students in their seventh (intern) year at Valle University spend four weeks at the Candelaria semirural health center.*

### Health Manpower in Rural Colombia

The 1966 Study of Health Manpower and Morbidity in Colombia provides a rich fund of data on national health needs and resources that amply demonstrate the nation's manpower shortages in rural areas (3,4). When this study was made, 75 per cent of Colombia's 8,000 physicians were practicing in urban centers with over 100,000 inhabitants. Less than 10 per cent were serving places with under 20,000 inhabitants, even though that is where 60 per cent of the people lived. Auxiliary nurses and other paraprofessionals failed to fill this gap. Since then, although adequate data are not available, the impression among professionals in Colombia is that the situation has not significantly improved.

#### *The Rural Internship*

Even though the specific duties of the rural

intern have not been precisely defined or classified, it appears that on the average over 80 per cent of his time is spent delivering clinical services.

Several medical educators have felt that the intern should be involved in extension of health services and community development. Unfortunately, the structure of the rural service mitigates against successful fulfillment of any such expectations (5). The graduate is called upon to direct a team of auxiliaries and community health workers (*promotoras*) but lacks training in team management. At the same time, he must deliver primary care but has had relatively little training for this role, because the elements of comprehensive primary care—including treatment of psychosocial and emotional problems, disease prevention, and management of patients with chronic illness—are underemphasized in his hospital-based university education. As in most other countries, the education provided by these centers tends to focus on secondary and tertiary care (6).

To compound the problem, resources at the intern's designated medical facility are limited; the interns themselves consider their living conditions undesirable; and the contrast between their cultural background and socioeconomic status and those of their patients aggravates an already difficult situation.

### *Training for the Rural Year*

Beginning in 1955 with the National Seminar on Rural Education, the Colombian system of medical education entered a period of dramatic change. Much of this change arose out of the work of ASCOFAME, the Association of Colombian Medical Schools. In 1963 the Association developed a descriptive definition of the "ideal" Colombian physician which specified that such a physician should possess the skills needed to meet rural needs. The plan then envisaged by the Association was to develop these skills during the student's performance of his obligatory rural internship.

A number of Colombian medical schools have developed training programs over the years to prepare students for the period of rural service (7), and all nine of the nation's schools apparently include some community work in their present curricula. Six of these schools were visited, including the three considered to have the most successful programs. Every medical school provides an eight- to 10-week training program during the medical student's clinical year, generally under the sponsorship of a department of social medicine.

However, the authors' impression from observing the programs and talking to students and physicians in rural service is that the average student spends more than 80 per cent of his time delivering medical services, and that he receives little training in team management, epidemiology, medical care administration, or planning. This opinion was supported by a study at one of the schools

showing that 83 per cent of the student's time was spent in caring for patients (8).

None of the school's programs had defined their educational and service objectives in a quantifiable manner, so it was not possible to rigorously evaluate the degree of success achieved in behavioral terms. Nevertheless, in each case it was evident that without medical students the program's service activities would have collapsed. Thus the programs did not appear to provide optimum learning conditions for the students, being themselves in need of a much stronger framework of health services to support their educational activities.

### **Enlarging the Rural Intern's Role**

If a rural intern system such as the one observed in Kenya were to be adopted, the intern would find himself with responsibilities in four general areas: clinical service, teaching, research, and administration. In each of these areas the intern's duties would constitute a key part of his overall task.

### *Clinical Service*

Many aspects of primary care duties currently performed by the intern in Colombia could be performed by nurse auxiliaries and other paraprofessionals (9). This approach implies a need to obtain or train adequate numbers of such paraprofessionals and, in general, means devoting more attention to the medical care system itself. Continuity in such a system is provided by the paraprofessionals; the intern, who helps to design protocols and to train these paraprofessionals in specific tasks, handles only the more sophisticated medical problems.

### *Teaching*

The rural intern supervising indigenous

health workers would occupy a role comparable to the teaching physician who supervises a clinical team and is responsible for upgrading team skills. In this connection, educational goals set by the intern should be defined in quantifiable terms to permit subsequent evaluation, and the knowledge and skills taught should depend on community needs.

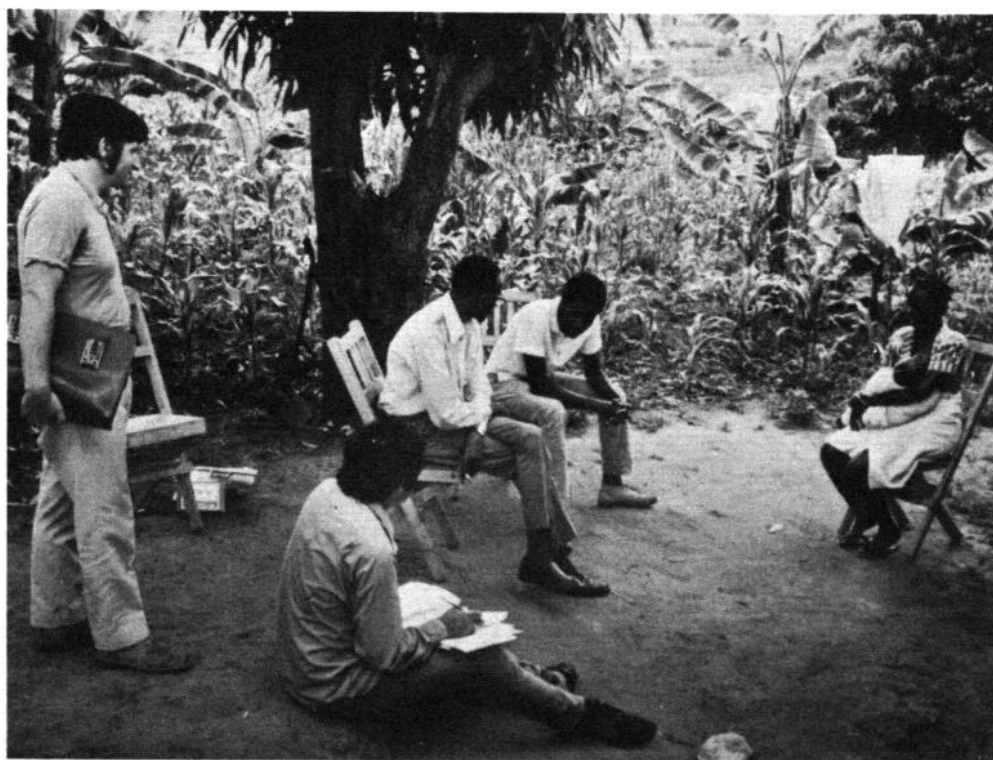
Rural interns would also be assigned responsibility for supervising medical students. In preparation for this, the students would be taught basic epidemiology and biostatistics early in their educational program and would thus be equipped to participate in surveys of community needs. (Both Kenya (10) and Tanzania (11) have independently developed this sort of role for medical students, with considerable curriculum time devoted to these duties.) The supervising intern would thus serve as a field instructor, complementing the work of the academic instructor based at the medical school. Later, in their clinical year, the medical students would return to the rural areas to do clinical work, much as they do now; but at that time they would become involved with the health

team and participate in extension of health services and patient education, as previously described.

### Research

The rural intern would make a potentially valuable contribution to health care research by acquiring information now sorely lacking. Once equipped with a methodology for data collection that is sufficiently flexible to be adapted to various settings, the intern could obtain the data needed for rational health care planning. A modification of the CENDES<sup>6</sup> health planning model developed by the Pan American Health Organization (12) could serve as the basis for such a system. As discussed earlier, students and paraprofessionals could do the actual data collection; the rural intern's task would be to provide planning, supervision, and analysis in collaboration with the university and the community served.

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*Kenya's medical students help to collect basic health data in rural areas. Here three second-year students and a faculty member from the University of Nairobi interview a woman at Machakos, a rural health center about 60 miles east of Nairobi, in connection with a census of the area and an anemia survey.*

### *Administration*

The rural intern would have clearly defined responsibilities in such areas as personnel, budget, and patient care. He would be responsible for the organization and planning of patient care on the one hand and of educational activities for both patients and health workers on the other.

## **Medical Education in Colombia**

### *Recent Changes*

Colombia's health system has recently experienced a number of changes aimed ultimately at regionalizing all health services and at reorganizing the pattern of health resource use so as to provide adequate coverage for all the people (13). However, the pace of innovations aimed at broadening health care delivery is less rapid now than it was a few years ago, and this has tended to tone down the impact of a number of dramatic changes which recently occurred in the field of medical education.

These exciting and rather remarkable events have already been described elsewhere (2). It should be noted that these changes in Colombia's system of medical education have not been analyzed in quantifiable terms. However, some political scientists have felt that they were the intellectual product of a few men and that the rationale underlying them had not necessarily received the acceptance of most Colombian educators and physicians.

### *The Present Situation*

Medical schools in Colombia, as in most other countries, lack rigorously defined educational objectives which would enable both

student and teacher to quantify success or failure (14,15). Such defined objectives are needed in all portions of the curriculum, including those portions dealing with the rural year. Once such objectives are adopted, methodologies designed to achieve them can be implemented and evaluation techniques can be used to determine whether the desired goals have in fact been achieved.

In both Colombia and Kenya training for the rural internship is carried out by departments of social medicine. In Kenya the objectives of this training are defined in consultation with the Ministry of Health. Naturally, a decision to institute this latter type of coordination involves political considerations outside the scope of this article. Nevertheless, there can be little doubt that for planning to be truly effective there must be some sort of feedback linking the felt needs of the ultimate rural consumers to the planning process—thereby helping to ensure that future interns are taught material that will be relevant to their rural work. In addition, at some point it will be necessary to secure the active cooperation of the Ministry of Health in changing some features of rural health services and in conducting such future manpower and morbidity surveys as may be needed for rational curriculum development.

The model just described thus approaches medical education from the perspective of perceived health care needs. In so doing it subordinates the rural intern's clinical duties to administrative, teaching, and research responsibilities. In addition, it assigns less priority to disease-oriented in-patient medicine in the rural setting than it does to primary care.

## **Conclusions**

Good medical education demands a good service base. Colombia has adopted an excit-

ing educational philosophy based on the country's needs; but partly because the service sector has failed to develop, implementation of that educational philosophy has lagged.

The program we have described implies a reorientation away from "the doctor best for the country" toward a health system most appropriate for the nation's needs and resources. The perspective this would give to doctors, students, and health workers could promote a more general understanding of the overall health problems facing the nation.

Another highly desirable feature is a uniform system of feasible but rigorous data collection relating to education and health service needs. Such a system can provide a basis for meaningful planning and evaluation.

Finally, it would seem desirable to adopt a quantitative approach to the planning and evaluation of medical education. That

is, objectives sought should be quantitatively defined by both students and teachers in terms of desired attitudes, knowledge, and skills. Educational processes should then be designed so as to attain these objectives.

Clearly, the foregoing is only a general model; if implemented, it would have to be adapted to the needs of each community by those providing and receiving the services in question. For, while any such program should have sufficient uniformity to meet national teaching and research needs, it must also have sufficient flexibility to fulfill the health requirements of the community served. In general, the authors believe that implementation of this model could provide a fruitful experience in medical education and health care delivery for a large proportion of those countries that have a period of obligatory rural service.

### SUMMARY

Sending new medical school graduates into rural areas does give underserved populations access to modern medical care, perhaps for the first time. However, these young physicians usually spend most of their time providing strictly clinical services and are generally eager to leave at the end of their assignment. Some have referred to this practice as "parachuting" a doctor into an underserved area.

An alternative is to focus first on building up permanent health service facilities in rural areas that are staffed by appropriate paraprofessionals. The young physician can then play a much more important role, serving as an administrator, re-

searcher, evaluator, and teacher of the local staff; his clinical activities would generally be confined to the more complicated medical problems that arise.

Such a model has been implemented in Kenya and Tanzania. An informal field assessment in Colombia has indicated that this model could be effectively applied there as well; indeed, it has been the hope of Colombian policymakers that the rural intern would function in such a way. However, this would require developing the nation's system of health services, as well as providing specific training aimed at preparing the medical student to perform his assigned role.

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