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#### ABSTRACT

Between 1978 and 1980, qualitative and numerical data were collected in a health post facility located in Patrite, a rural village in highland Guatemala, in order to determine the effectiveness of rural health service delivery, including nutrition programs. Data were collected by: (1) interviews as to purposes and goals of general health care; (2) case descriptions of the types of programs implemented, and the day-to-day operations of a rural health facility; and (3) measurements of health and nutritional status of health care recipients. Certain programs such as immediate care, child vaccinations and food supplemental programs provided immediate benefits to recipients. However, these benefits were contingent upon the personal characteristics of health care services personnel. Other programs such as health and nutrition care education appeared to have more subtle and long-term positive effects. The Guatemalan health care system is "dendritic" or a centralized system. There is essentially no local control, input or involvement. On the other hand, little or no personnel and resources are provided by the national government, resulting in inconsistencies, disrupted resources, and constantly changing personnel. (ALL)

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## Rural Health Care Delivery and Nutrition Program Implementation: A Case Study From Highland Guatemala

by

Daniel G. Rodeheaver

Department of Sociology University of Georgia

### Denise P. Rodeheaver

ALCON Laboratories, Inc. Fort Worth, Texas

Most evaluation studies generally draw inferences from sample means. However, useful information can be drawn from case studies. Between 1978 and 1980, qualitative and numerical data were collected in a health post facility located in rural village in highland Guatemala in order to determine the effectiveness of rural health care/service delivery, including nutrition programs. Some of the qualitative data include interviews as to purposes and goals of general health care, descriptions of the types of programs implemented, and the day-to-day operations of a rural health facility. Empirical data include measurements of health and nutritional status of health care recipients. Certain programs such as immediate care, child vaccinations and food supplemental programs provided immediate benefits to recipients. However, these benefits were contingent upon the personal characteristics of health care services personnel. Other programs such as health and nutrition care education appeared to have had more subtle and long-term positive effects.

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Rural Health Care Delivery and Nutrition Program Implementation: A Case Study From Highland Guatemala

### Introduction

Nutrition problems, in particular, tend to be monumental for most Guatemalans. This is especially the case for children where at least 80% of all children suffer from undernutrition (Rodeheaver 1982). For the people residing in the highlands of Guatemala, the problems of nutrition and health are virtually inseparable. Programs aimed at addressing problems of nutritional status, therefore, tend to be at the heart of the rural health system. The purpose of this paper is to describe an example of rural health care delivery and nutrition program implementation and the health care system in which it is delivered. The method employed in this paper was participant observation.

# <u>Background of this Paper</u>

Between 1978 and 1980, serving as Peace Corps volunteers, we lived and worked in a small village in the <u>altiplano</u> (highlands) of Guatemala called Patzite. Our assignment, in part, was to design and implement nutritional care and educational programs. Theoretically, this program development and implementation was integrated into the national health care system under the auspices of the Guatemalan Ministry of Health. However, due to various political considerations and the remoteness of this small village, little interaction with this ministry took place.



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Patzite is what is referred to as a <u>municipio</u>, roughly equivalent to a "county", and the town itself is called a <u>cabacera municipal</u>, or county seat. In 1980, the <u>municipio</u> of Patzite had a population of 1,800, while 300-500 people at any given time resided in the town of Patzite.

The name, Patzite, is Mayan Quiche for "the place of the <u>tzi' te</u> tree". The <u>tzi' te</u> is a primitive type tree from which branches can be cut and planted. A new tree is then produced. In the highlands of Guatemala, this tree is often used as fence posting because of the way it grows.

The town of Patzite sits in a relatively small, bowl shaped valley at an altitude of about 7,600 feet, surrounded by mountains on three sides. Since Patzite is also a <u>municipio</u>, the town has a district elementary school and a health post (<u>Puesto de Salud</u>). Guatemala's national health care system is community-oriented, providing basic care to all of its citizens as a means of controlling contagious and infectious diseases. It is through this health post that community health care is delivered.

### Case Description

First, most of Guatemala which lies outside of Guatemala City generally qualifies as rural. Guatemala's urban system has been described as an "urban primate" in which Guatemala City is the largest with the next largest city, in 1' J, being Quezaltenango with a population of only 53,000 (Rodeheaver 1982). Because of this political and economic distortion, and given the correlating political



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administrative, transportation and market systems, Carol Smith (1976) has described Guatemala as comprised of a "dendritic" system. In brief, this dentritic system can be thought of as one in which from the central node (or core) springs satellites which, in turn, have their satellites. Aside from being a distributional/redistributional system, it mirrors the overall stratification system of Guatemala. The Guatemalan health care system, likewise, tends to reflect that same stratification process, in which most of the nation's health resources tend to be concentrated in the core and the remainder is then uniformly distributed to its subordinate nodes; the further out from the core, the less the resources which are available. Patzite is a relatively small <u>municipio</u> and, therefore, receives little support.

During the time period with which this paper is concerned the <u>Puesto de Salud</u> of Patzite employed three full-time health workers. These included a medical student/ intern who was usually assigned to any given health post (or center) for a "rotation" period of six months. This assignment was essentially a form of repayment for government-subsidized medical schooling. These students received little or no supervision, but were monitored through the individual reports required of the other health post workers. However, these reports generally went unread. The primary responsibilities of the doctor was to provide clinical diagnosis and treatment and to prescribe medication to those patients who visited the health post. Due to the



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timing of the rotations, the health post was occasionally without a doctor for extended periods.

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Particularly, in Patzite there was also a nurse and a rural health technician, who were more or less permanently assigned to the health post. Most of the day-to-day administrative duties and decisions were their responsibilities. The doctor's involvement in the decisionmaking with respect to the operation of the health post was usually limited to major decisions. However, even in these instances, he would usually defer to the nurse's and rural health technician's suggestions. Given that the intern's position is temporarily occupied by any given individual, the doctor is understandably limited in his (or her) influence.

In the absence of the doctor, the health post's nurse would also provide patients with limited diagnosis, treatment and medication prescriptions. The rural health technician (TSR) primarily coordinated healtn-related activities in the community(s) such as vaccination programs and public health information. Theoretically, a social worker is assigned to the health post in order to promote the development of social networks which would facilitate the dissemination of information, including that related to health and nutrition. During the entire period in which this paper is concerned, only one social worker was actually assigned to the Patzite health post. She worked in a very



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limited capacity and, in fact, did not remain the entire six months of her assignment.

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Interestingly, as was disclosed to us during interviews, usually all government assigned employeestemporary and permanent, including for example health workers, teachers and government secretaries, were purposively non-native to their assigned region. It was thought by those high in Guatemala's political system and military that, if these workers were to come from the same regions, the workers, being educated, would tend to be sympathetic to the social problems of the local residents. It was feared by the state that these workers would then turn this sympathy in organizing efforts aimed at either social, political and economic reforms or, even, political insurgency. In short, these workers tended to represent instability for the political economy at both the regional and national levels. However, the consequences of such assignment based on risk-aversion by the government tended to include extreme dissatisfaction by its workers. Furthermore, it was not uncommon for workers to have a spouse and children residing in another town. As a result, the production levels of these workers, and thus their respective services, were often very low.

# Health Care Delivery and Nutrition Programs

Guatemala sponsors a limited national health program in which clinical diagnosis and treatments are provided free of charge to those willing to make use of the health post

services. Health care delivery is generally limited to diagnosis and treatment available in the health post. The medical services of the health post are limited by the availability of resources. Thus, aside from simple diagnosis and treatment of injuries, the health post's most important function is preventative medicine through sponsorship and promotion of vaccination and nutrition programs.

Childhood disease vaccination programs were conducted annually during February and April at various locations in the urban center of Patzite and its outlying <u>aldeas</u> (rural villages) and <u>cantones</u> (neighborhoods). In 1979, there were 497 children eligible for vaccinations. All but two received vaccinations. The vaccination rate for the <u>municipio</u> of Patzite, however, was unusually high. Reports from other <u>municipios</u> where Peace Corps volunteers were stationed indicated that about forty percent was more the norm.

The nutritional programs were organized around the already existent CARE food aid program. (Most of these food aid programs were in response to the 1976 Guatemalan earthquake.) As throughout most of Guatemala, CARE foodstuffs were generally distributed from health posts and centers by health personnel. However, in most cases, very little nutritional and health education was integrated into these distribution programs. What often happened as a result was the misuse, abuse or waste of these foods (Rodeheaver 1982).

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In the case of Patzite, we combined the distribution of CARE food with an educational program designed not only to monitor the health and nutritional status of its recipients, but also to provide information on how to use the CARE products. It is in this sense that CARE food was used as an incentive.

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There were two groups of beneficiaries. One was composed of expectant and lactating mothers. The other was made up of households/families which had children under the age of six. In general, these groups met once a month. However, because the group which received CARE food for children grew to be very large, it was decided that this group should be split into two. In their case, one would meet on the first of the month, while the other would meet on the fifteenth.

Each recipient received one allotment of food products. In the case of households with small children, they also received an allotment for each child under the age of six. An allotment was roughly equivalent to eight pounds of foodstuffs per month. The CARE products distributed during 1978-1980 included powdered milk, peanut cooking oil, wheat, flour, rice-soya mix, and corn-soy-milk flour (CSM). To help defray the costs of transporting the foodstuffs to Patzite, it was decided that each recipient should pay nominal fee of 10 cents (unless they were unable to pay). Each recipient was also required to bring their own containers for storing the food.



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Also, in order to receive these foods recipients were required to have regular medical check-ups and attend educational seminars. Particularly in the case of children, each recipient's health and nutritional status was recorded on cards, containing their monthly health reports. Nutritional and health information recorded included age, sex, height, weight, upper arm circumference and other indicators of physical health status. This information was then used to monitor any special needs and to prevent or alleviate health-related problems faced by recipients. It also allowed for the monitoring of the general health and nutritional states of the community.

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The educational program which was integral to the overall program included presentations and demonstrations on such topics as how to prepare and get the most out of the food products distributed by CARE, sanitation, child-care, etc. This nutritional/health education was geared to the specific requirements of the population, with respect to their language and cultural practices, concepts of food and food preparation and so on. Also important to this program were home visits in which recipients and their specific needs were given individual attention. (These visits were not mandatory.) This, too, allowed the health post personnel to monitor the incorporation of information provided during monthly meetings. Various types of home demonstrations were provided during these home visits. These ranged from food preparation methods to home gardening.

# Problems Faced in the Conduct of Health Care Delivery

The greatest obstacles faced in the delivery of rural health care in this highland community of Guatemala included language and culture and lack of necessary funds and equipment. Almost everyone in the municipio of Patzite was a native Maya Quiche speaker, whereas the health post personnel were Spanish speakers. In this same light, the people of Patzite were ethnically indigenas (Mayan Indians). The health post personnel, on the other hand, were ladinos; that is, they practiced western (Spanish) ideology and culture. Historically, the breach between the two ethnic groups has been tremendous (cf, Peacock 1982, 1986; Rodeheaver 1990). In addition, there was some resentment on the part of the local midwives, who traditionally provide many of the medical needs of families. By the time-frame of this paper, midwives were required by the Guatemalan Ministry of Health to attend classes given by the local nurse to maintain their certification. Because of the conflict produced by this certification procedure, many people in the Patzite area, as was the case in most other municipios throughout Guatemala, were very wary of using the services provided by the health post.

The well-being of children - not to mention the fact that these programs were aimed at lactating and expectant mothers - is the domain of women in Patzite. Yet, women remain the most traditional among the Mayan Indians, with very few having the ability or education to fluently

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converse in Spanish. They also tend to show the greatest distrust of the outside world and its proponents. Sometimes, children familiar with the health post personnel and programs would be instrumental in convincing their mothers to attend. Often, though, meeting attendance was adversely affected when other family and economic matters would take precedence over attending the nutrition education programs and, thus, receiving food aid.

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Equipment and supplies in the health post consisted of a rudimentary doctor's kit (hypodermics, reused needles, forceps, scalpels, scissors, etc.), information packets from various agencies and a varied supply of medicines (most of which were U.S. surplus with directions printed in English). The sera for vaccinations was delivered on a schedule to the health post and kept on ice until disseminated. Many of the sparse furnishings found in the health post had been assembled by the health personnel at their own personal cost.

### <u>Interpretations</u>

All indications were that the initiative of the health post workers was most likely responsible for the high vaccination rate experienced in Patzite, given that they were especially sensitive to the language and cultural needs of the community's residents as compared to health workers elsewhere. The health post personnel, especially the nurse and the TSR, attempted to learn the language, Maya Quiche, in order to understand the local culture and facilitate the

process of health care. They were particularly committed to a program of community health and nutrition. Their willingness to make home visits promoted or fostered a greater sense of trust from the local residents.

Frequently, these individuals would create special events as a means of raising money for the purposes of acquiring much needed equipment. One of the most persistent problems faced in the operation of the health post was the lack of such basics as hypodermic needles. Equally, sterilization of surgical equipment was virtually impossible. It was decided that the solution to these problems was to acquire an autoclave with which materials could be sterilized. Therefore, two events were promoted during the <u>fiesta titular</u> (town's annual patron saint celebration) which generated enough money to buy one for the health post.

The health post in Guatemala provides necessary, but rudimentary diagnosis and treatment of disease and injury. However, the health education and nutrition programs carried out by the health post workers may have the greatest longterm impact. That is, their effects may be most felt by attempting to improves those conditions which promote the majority of diseases in the area, especially those among children. For the more rural <u>municipios</u>, the scarce resources of the health post and lack of demonstrable compensation forces the personal initiative and commitment of the health post workers to become the most predominant

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force of either success or failure of the rural health care delivery system, not only in Patzite, but also throughout Guatemala. Since most health post workers in Guatemala are generally educated urbanites, interested in careers in Guatemala City and hostile and not native to the particular villages in which they work, health care programs are hampered or made ineffective by a lack of appropriate personnel with long-term commitments. The case history discussed here represents one of the more effective rural health care systems in that country.

### Policy Implications

In Guatemala, including its rural hinterland, the structure of a health care system is in place. It may be characterized as a dendritic, centralized system; one in which there is essentially no local control, input or involvement. Little or no personnel and resources, however, are provided by the national government, resulting in inconsistencies. That is, resources are disrupted, personnel are constantly changing, and there is no indigenous or local base to support this health care system. In other words, effective health and nutrition programs are contingent upon the personal characteristics of health post workers.

If a health care system is to be effective, the system must be self-perpetuating. Because it is in the interest of local communities to have adequate health care systems, especially given the nature of health and nutritional problems faced by most Guatemalans, there must be local

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involvement and health care workers must be committed to the communities in which they work. At the same time, these communities are economically poor and it is imperative that the national health care system provide much needed equipment, supplies and resources. The likelihood of a selfperpetuating health care system is contingent upon the meeting of these conditions.



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