Travel Notes: A Liberian Medical Experience

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The delivery of even the simplest form of health care has three prerequisites: a population to whom the health care can be delivered, a knowledge of the type of care to deliver, and a means of delivery. In a developing country the “who,” “what,” and “how” are closely related. Health can no longer be conveniently defined as the mere absence of disease. Just as important as the physical state of a person is his attitude toward that state. Health attitudes, in turn, cannot be assessed without some knowledge of the environment within which these attitudes are formed. The method of health care delivery will also influence health attitudes, and that effect need not necessarily be positive. The implication of this “interrelatedness” is that Western medicine must broaden its hitherto disease-oriented approach and adapt to the realities of different cultures. The following account is an attempt to describe some of the ways in which Western medicine has changed and is being changed in response to the demands of a developing country, in this case Liberia.

THE COUNTRY

Liberia is located on the coast of West Africa in the tropical rainforest belt (see Fig. 1). Although the country is approximately the size of Ohio, it is quite sparsely populated and had only 1.3 million inhabitants (1). Liberia was colonized in the 1820s by emancipated American slaves and was Africa’s first independent state. As such it experienced neither the exploitation nor the developmental benefits of colonization by a Western power.

Monrovia, the only major population center, has electricity, potable water, a sewage system, and a telephone network. None of these amenities is available to the majority of the population. “Up country” villages consist of clusters of mud-and-stick buildings with either thatch or corrugated zinc roofs (see Fig. 2). Roads are few and mostly unpaved. The larger roadside villages create a population “backbone” through the densely forested country, but the majority of villages can be reached only by foot. The only railway lines in the country have been built by the mining concessions for the transportation of iron ore to the sea. Iron ore and rubber are Liberia’s major foreign exports.

Eighty percent of the population of Liberia supports itself through subsistence agriculture. Unlike many other countries in Africa, subsistence in Liberia means exactly that, so very few people are starving. The heavy rains (150 in./yr) and warm climate are ideal for raising upland rice, the staple crop, but the poor soil necessitates the use of laborious slash-and-burn methods to clear new fields each year. During the dry months of January and February the entire country is covered with a pall of smoke as farmers burn away the underbush of their new fields.

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FIG. 1. Map showing Liberia and its relation to the African continent.

FIG. 2. A remote Loma village.
THE HOSPITAL

Curran Lutheran Hospital is located in ZorZor, a town of 3500 people, which is 165 miles inland and at an elevation of 1600 ft. The town is in the southern region of Lofa County, which has 135,000 inhabitants. There are three physicians in the county, two at Curran and one at the government hospital at Voinjama. Although the hospital is the largest employer in ZorZor, every able-bodied man owns and/or works on a rice farm. The per capita cash income is estimated to be $30.00/yr. The average hourly wage for unskilled labor is 15¢/hr.

Curran Hospital was founded 50 yr ago by Lutheran missionaries. The hospital has 97 acute care beds on three wards, medical/surgical, pediatrics, and obstetrics (See Fig. 3). In addition, there are 48 beds for tuberculosis patients, 24 beds for orphans and their caretakers, and a 48-bed leprosarium 1 mile from the hospital. The operating room is equipped to do most procedures possible under local or regional anesthesia. General anesthesia is limited to emergency situations. The hospital makes its own IV solutions, generates its own power, and reuses anything that can survive an autoclave. A truck comes up from Monrovia with supplies and mail once a week unless the road is impassable due to the rains.

Curran Hospital refuses no one admission, and the rates are in line with the local standard of living (see Table 1). The use of the facilities is intense. The adult and pediatric wards average 110% occupancy, and as many as 250 people are seen a day in clinic. Clearly, this amount of work is impossible for two physicians to perform and, in fact, the Liberian nursing staff delivers most of the medical care. All nurses start iv’s, and the head nurses on each floor admit patients, prescribe drugs, and do minor procedures. A physician in this environment functions much more as a quarterback and teacher of a health care team than as a simple clinician. One of the great challenges of African medicine for a physician is trying to fulfill all of these roles simultaneously. A strict priority system is necessary since they often make conflicting demands on one’s time.

The hospital is deeply committed to teaching and runs schools of midwifery and

FIG. 3. Curran Lutheran Hospital.
TABLE 1
Curran Lutheran Hospital Fee Schedule

|                      | Regular clinic fee | Emergency visit fee | Doctor's examination | Afternoon clinic fee |
|----------------------|-------------------|---------------------|----------------------|---------------------|
| **Outpatient**       |                   |                     |                      |                     |
| Adults               | 35¢               | 75¢                 | 50¢                  | $2.00               |
| Children             | 20¢               | 40¢                 | 30¢                  | 1.50                |
| Onchocerciasis—diethylcarbamazine or suramin | $4.00 |                     |                      |                     |
| Schistosomiasis—stibophen or ambilar | $4.00 |                     |                      |                     |
| Ascaris or hookworm  | 0.15              |                     |                      |                     |
| Strongyloides or trichurias—thiabendazole | 0.10/visit |                     |                      |                     |
| Return visits for injections Adults | 0.20/visit |                     |                      |                     |
| Children             | 0.10/visit        |                     |                      |                     |
| Vaccine fee (1 B.C.G. and 3 D.P.T.) | $0.40 |                     |                      |                     |
| Chest X ray          |                   |                     |                      |                     |
| **Inpatient**        |                   |                     |                      |                     |
| Obstetrics           |                   |                     |                      |                     |
| Delivery; prenatal care, and 3 months postpartum | $12.00 |                     |                      |                     |
| Delivery, unregistered, and 3 months postpartum care | 15.00 |                     |                      |                     |
| Delivery with private room—add $24.00 plus $2.00/day for each day more than 1 week. | $50.00–$100.00 |                     |                      |                     |
| Expatriates and others earning over $300/month Fee includes private room—consult Medical Director | $18.00 |                     |                      |                     |
| Operative procedures C-section additional | 7.00 |                     |                      |                     |
| Symphysiotomy additional | 12.00 |                     |                      |                     |
| Curettage (incomplete abortion) | 12.00 |                     |                      |                     |
| Surgery              |                   |                     |                      |                     |
| Hernia, Hysterectomy, V.V. fistula, other major | $30.00 |                     |                      |                     |
| Bilateral hernias    | 35.00             |                     |                      |                     |
| Bowel resection      | 35.00             |                     |                      |                     |
| Tendon repair (depending on number of tendons) | 10.00–25.00 |                     |                      |                     |
| Small laceration (charge additional if large) | 3.00  |                     |                      |                     |
| Pediatrics           |                   |                     |                      |                     |
| Admissions, short-term (less than 1 month) | $5.00  |                     |                      |                     |
| Admissions, 1–3 months (Kwashiorkor, etc.) | 8.00  |                     |                      |                     |
| Tetanus neonatorum   | 10.00             |                     |                      |                     |
| Meningitis and Tuberculosis | 12.00 |                     |                      |                     |
| Adult medical        |                   |                     |                      |                     |
| Ward admission less than 1 month | 13.00 |                     |                      |                     |
| over 1 month—50¢/day, or | 3.00/week |                     |                      |                     |
| Meningitis, tuberculosis, tetanus, and leprosy | 25.00 |                     |                      |                     |
| Private room—$25.00, plus $3.00/day or $18.00/week if over 1 week |                          |                      |                     |
| Semiprivate room—$18.00, plus $2.00/day or $12.00/week if over 1 week |                          |                      |                     |
| Food prepared by hospital (3 meals/day) additional 2.00/day |                          |                      |                     |

practical nursing. The applicants to these programs must have completed tenth grade (roughly equivalent to seventh grade in the United States), and they receive two years of training. These students do the majority of inpatient care. After graduation, the practical nurses and midwives usually go to work in the village clinics and constitute the front line troops of the Liberian medical care system.
DISEASE

A cross section of inpatient pathology can be seen in Table 2, which shows admission diagnoses on the adult and pediatric wards for one year. In children the chief killers are the triad of diarrhea, malnutrition, and dehydration; of only slightly less importance are pneumonia, malaria, meningitis, measles, and TB. Very few children have only one problem. Among mothers, hemorrhage and sepsis claim the most lives. The adult ward presents a much more heterogeneous picture with pneumonia, TB, cardiac decompensation, hypertension, and diarrhea causing the majority of deaths.

As a crisis care center, the hospital sees a skewed picture of disease in Lofa County. Unfortunately, transportation from the interior is difficult, country

| TABLE 2 |
| --- |
| Admission Diagnoses on Adult and Pediatric Wards at Curran Lutheran Hospital for 1 Yr |

| Pediatric Ward | Adult Ward |
| --- | --- |
| Diagnosis | Admissions | Diagnosis | Admissions |
| Pneumonia | 48 | Pneumonia | 49 |
| Aspiration pneumonia | 12 | Tuberculosis | 27 |
| Asthma | 1 | Asthma | 6 |
| Pertussis | 22 | Other respiratory infections | 14 |
| Tuberculosis | 11 | Diarrhea | 116 |
| Other respiratory infections | 30 | Amebic dysentery | 12 |
| Diarrhea | 253 | Amebic abscess | 7 |
| Amebic dysentery | 9 | Enteric fever | 9 |
| Enteric fever | 2 | Gastritis/ulcer | 10 |
| Malnutrition/kwashiorkor | 112 | Perf. ulcer | 2 |
| Anemia | 19 | Bowel obst. | 4 |
| Sicklemia | 10 | Peritonitis/appendicitis | 25 |
| Malignancies | 1 | P.I.D. | 9 |
| Cellulitis/abcess | 14 | Hepatitis | 5 |
| Septicemia | 2 | Hepatic failure | 1 |
| Peritonitis | 7 | Cardiac decomp. | 23 |
| Meningitis | 27 | Anemia | 6 |
| Encephalitis | 8 | Hemorrhage | 3 |
| Febrile illness | 19 | Leukemia | 1 |
| Febrile seizure | 12 | Other malignancies | 15 |
| Seizure disorder | 4 | Cellulitis/abcess | 35 |
| Malaria | 20 | Septicemia | 0 |
| Tetanus neonatorum | 29 | Meningitis | 11 |
| Measles | 9 | Encephalitis | 7 |
| Trauma | 5 | Febrile Illness | 15 |
| Poisoning | 6 | Malaria | 8 |
| Burns | 2 | Tetanus | 5 |
| Orphan care | 22 | Stroke | 8 |
| Other | 30 | Trauma/burns | 44 |
| Total | 746 | Poisoning | 2 |
| | | Snakebite | 4 |
| | | Renal decomp. | 3 |
| | | U.T.I. | 9 |
| | | Psychiatric | 16 |
| | | Herniae | 96 |
| | | Other surgery | 59 |
| | | Other | 41 |
| | | Total | 707 |
medicine is used by many, and so the actual incidence and prevalence of disease in the country are unknown. The death rate is high (although again unknown) and is undoubtedly contributed to by the factors of low income, lack of access to trained medical personnel, lack of understanding of hygiene or the nature of disease, and the lack of sewage disposal or safe drinking water. Ascaris, hookworm, shistosoma hematobium, oncocerciasis volvulus, salmonella, shigella, TB, pertussis, measles, and tetanus neonatorum are common. Liberia is a hyperendemic area for falciparim malaria. Parasitic disease is easily the most common cause of pathology seen in the outpatient department. On the other hand, there are diseases common in more technologized countries that one sees rarely or not at all at Curran. These include obesity, arteriosclerotic heart disease, hemorrhoids, carcinoma of the bowel, diverticulosis, and varicose veins.

COUNTRY MEDICINE

Even given the prevalence of the diseases discussed above, it would be naive to assume that there exists no indigenous health care system. In fact there is a large body of traditional medical practice commonly termed “country medicine.” ZorZor is just north of the intersection of the Loma and Kpelle tribal areas, and since the region was never colonized, these cultures have survived relatively intact. Most important is the continued power of ritual, secret societies. The mens’ secret society is called Poro, while the womens’ society is known as Sande. It is from these societies that the practitioners of the art of country medicine come.

From the age of puberty, essentially every male in the Loma and Kpelle tribal areas is a member of the Poro society. The leaders of the society are known as Zowes (singular Zo). They achieve this rank by virtue of a process of divination that occurs before birth and learn their skills from older Zowes in the tribe. There are different types of Zowes, each with his own set of “powers.” The Zo possessing healing powers is the practitioner of country medicine. If he is adept, he can support himself and a family on the fruits of his practice.

The practice of country medicine is, however, not confined to men. Zowes of the Sande society do essentially all of the up country midwifery. Indeed, it is only in the last twenty years that country women have allowed any man, even a physician, to be in the same building when they were delivering. On the average, country medicine costs somewhat more than Western medicine, but this is difficult to assess since the country doctor accepts payment in goods as well as currency.

When the hospital was first founded, the country doctors and midwives actively opposed the use of Western medicine. Since then, the situation has become one of mutual tolerance, and, in fact, there are certain diseases that are recognized by Western and country doctors to be handled best by the other type of practitioner. Country doctors often refer to the hospital patients with inguinal herniae, urethral strictures, some trauma cases, and even an occasional severe pneumonia. The hospital physicians, in turn, often refer closed fractures of long bones, and a great deal of psychiatric disease, usually under the covering diagnosis of “open mole.”

In the rural Liberian view “open mole” is an age-dependent phenomenon. In young children it occurs when they are dehydrated and their fontanel is depressed. Numerous salves, both local and commercial, are marketed for the treatment of this condition. The salve is placed on the fontanel and carefully replenished by mothers even while the child is in the hospital being rehydrated. Open mole in adults is a much more complex problem. Basically any adult who is ill-at-ease with his envi-
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enronment, anxious, depressed, or even frankly psychotic is examined by a country doctor, who often finds a soft spot somewhere on the head of the patient. This is pathognomonic of open mole. Treatment consists of various salves, plus what is apparently some form of counseling by the country doctor, and seems to be surprisingly successful.

Country medicine is a force to be reckoned with by any practitioner of Western medicine in Africa simply because it is ubiquitous, powerful, and potentially harmful. Even the hospital staff members use country medicines for diarrhea or URI's, perhaps in a manner analogous to the home tonics used by generations of American families. Unfortunately, country medicine can be far less benign. Its use can delay proper treatment of serious medical conditions, and some of the country medicines have proven to be brutally effective hepatic and renal toxins. Finally, one must realize the adverse impact that country medical beliefs may have on nutrition and hygiene. Pregnant women, for example, may have dietary restrictions placed upon them in an already compromised nutritional situation.

IN THE HOSPITAL

Given the environmental and cultural differences, it certainly is not surprising that in- and outpatient care presented a unique set of problems for someone trained in the Western medical system. One particularly vexing difficulty was that of communication between hospital staff and patients. Although English is the Liberian national language, it is not spoken by the majority of the population. In fact, there are 29 mutually unintelligible languages spoken in Liberia, of which six were in daily use at Curran. This occasionally necessitated the use of one, two, or even (in scenes reminiscent of a Marx Brothers' movie) three intermediaries between doctor and patient. Also, the country people found certain topics difficult to discuss. Fertility, for example, is a very highly valued trait in Liberian culture. Unfortunately gonococcal disease is prevalent, so many young women are sterile and childless. It might take half an hour of questioning and a physical exam before it became apparent that a woman had come in the hope of having a pelvic exam, so the doctor or nurse could "put in a baby." The use of country medicine was another area that was very difficult to explore. Either patients were embarrassed to admit its existence, or they worried that the medicine would lose its power if revealed. Taking a history could clearly be a very frustrating experience, and patience was an asset beyond all price.

Clinical decision making at Curran required flexibility, a willingness to improvise, and, all too often, the use of nonmedical criteria. Placebos, usually vitamins or aspirin, were commonly used. People simply would not return to the hospital if they received nothing in return for their clinic fee. Surprisingly, the incidence of what some physicians would term "crocky" complaints was probably as high as in the United States, so many clinic visits were undoubtedly not strictly medically indicated. However, it was poor practice to place any impediment, attitudinal or financial, to the use of the clinic. The one time when that person decided to go to the country doctor might be when he or his child most needed Western medicine.

Keeping patients in the hospital once they were admitted could also be a problem. The reputation of this and, I would assume, most bush hospitals rested on its surgical "cures." Surgical results were clear-cut, occasionally heroic, and relatively rapid. Patients asked almost hopefully if they would have to undergo surgery. This was clearly the most powerful medicine that we had to offer. Unfortunately this also
meant that if there was no immediate resolution of the disease (or surgery), a patient or his family could quickly become discouraged and disappear overnight. Occasionally quite direct methods had to be used to keep patients in the hospital; iv's were very useful in this area. Dehydrated children received iv fluids when a naso-gastric tube would have sufficed because the iv represented a powerful enough intervention on our part to keep the mother in the hospital. The hospital experience was that the morbidity associated with iv therapy was less than that associated with a mother removing a sick infant from the hospital.

For a practitioner, probably the greatest difference between medicine in a bush hospital and in a typical United States facility is the clear-cut nature of the cost/benefit considerations inherent in each therapeutic decision. Given limited means and severely ill patients, the allocation of resources often involved life and death decisions. These decisions were greatly complicated by the fact that there was no public transportation in the Loma and Kpelle tribal areas. This seemingly irrelevant fact was important because the transportation of a body thus required the charter of a taxi, and local custom dictated that no living person could ride in a taxi for 48 hr after it had carried a body. The family then had to pay the taxi driver 2 days' worth of lost revenue, which could amount to $50 or $100, depending on the unscrupulousness of the driver. Thus, there existed a pressure to discharge a terminal patient soon enough to ensure that he could be transported home alive. This is not as mercenary as it sounds because among the Loma and Kpelle people, it is very important that a person die at home among the family if possible. Also, if a great deal of money was spent on a taxi, then the family might not be able to afford a funeral of the proportions commensurate with the prestige of the deceased.

Thus, the rural Liberian attitude toward death was important to a physician because he faced it every day on every critical patient. In general, it seemed that death was a more accepted part of the rural Liberian world view than ours. With infant mortality approaching 50% in the bush, and given the large, close-knit extended families, death of a family member must be relatively common. Teleologically then, these people seem to have developed more adequate mechanisms to cope with death than Westerners. Many Liberians turn to Christianity in the face of death, yet undoubtedly many are still influenced by the more traditional African beliefs that the nearer a person is to death, the closer he is to his venerated ancestors. Advancement into the flow of ancestral lineage is as necessary and as accepted as birth.

This is not to say that there was no mourning. Indeed, the wailing and crying of women could be heard throughout the hospital when a patient died. Here again, perhaps the expression of loss helped to dissipate some of the later power of the emotion. Certainly, the grief rarely became anger at the hospital for having "failed." Of course, Western medicine was a second choice for some, yet the predominant attitude toward the hospital was one of trust and the assumption that we had done our best.

On a day to day basis, probably the most valuable attributes a physician could have in such a hospital as Curran were patience and the ability to function in the midst of bedlam. Since the hospital was severely understaffed, each patient was allowed, and in fact encouraged, to have a "caretaker" who would sleep on the floor by the patient's bed, bring in meals cooked in the hospital's outdoor kitchens, and perform simple nursing tasks. There were no restrictions on visiting, so if each of the 27 patients on the adult ward brought a caretaker and two other family members, there could be as many as 100 people spending most of their day on the ward. There
was, unfortunately, a certain amount of prestige associated with having a large number of attendants.

The major advantage of this system is that it allows understaffed bush hospitals to function with high patient loads. It also makes good cultural "sense." The differences between a rural African village and even a small bush hospital are incomprehensible to a Western mind and certainly are lessened by allowing a patient to be surrounded by family.

The disadvantages of the system are unfortunately also rather numerous. Although the potential for good care exists, so does the reverse. One never knew when a caretaker would decide to adjust the rate of an iv, move a heat lamp too close, or make changes in a patient's diet. Having so many people in the ward could be a serious handicap during an emergency, and there was very little privacy, an important consideration to Liberians.

**MEDICINE MOVES OUT**

Although most physicians find inpatient medicine in Africa to be fascinating and challenging, public health is where the action is. It is clear that the most effective use of a health care dollar in Africa is in preventive health measures. Much chronic disease, especially in the younger age group, can be eliminated where effective maternal and child health services are offered, and where proper nutritional practices can be taught. The spread of this "gospel" really started with Maurice King's book, "Health Care in Developing Countries" (2). King pointed out the fallacies of trying to implement an inpatient oriented medical care system in developing countries, and, more importantly, presented practical guidelines for alternative approaches. An experienced mission doctor advises prospective mission physicians to "study this book like the Scriptures until you are thoroughly indoctrinated" (3), a high recommendation indeed.

Curran Hospital now operates a Public Health Program, in which the guidelines proposed by King have been adapted to the local area. It consists of three major, and somewhat overlapping, areas of activity. The first is the medical supervision of 12 village clinics scattered throughout Lofa County. These clinics are visited monthly by a physician from Curran, who sees acute or problem patients. There is also a monthly seminar for the staff of the clinics in which a physician reviews some specific diagnostic problem such as "abdominal pain."

The second area of activity is less crisis oriented. A Mobile Team has been organized and visits 18 towns once a month in a VW bus. The Mobile Team runs an ongoing Pre-Natal Clinic, participates in the annual immunization program of all 51 towns in the country, and refers women to the active Family Planning Program at the hospital. More importantly, the Mobile Team runs an Under-Fives Clinic to check on the health of all children registered with the program. This involves recording weights, easily the most sensitive health indicator in African children, a brief physical by a nurse, and advice and instruction for the mother concerning nutrition.

It is impossible to exaggerate the importance of the nutrition counseling. The major causes of morbidity in children under five in Liberia are related to feeding. In Liberia a child is breast fed basically until displaced by the next child. If this happens before the older child is able to eat solid food, he may quickly become malnourished. As the child becomes lethargic and sickly, the mother may try to force food down the child's throat in a process aptly called stuffing. Stuffing quickly leads to aspiration pneumonia and death. Another feeding practice that is actively discouraged
by the Mobile Team is the use of infant formula. Formula is often used as a prestige item, an attitude that is reinforced by the formula manufacturers. Unfortunately, since it is relatively expensive, the formula is often prepared in a very dilute form which causes malnutrition. Also, non-sterile preparation of the formula results in chronic diarrhea and dehydration. It is unreasonable to expect a mother in the bush to use a sterile technique, so breast feeding, the spacing of children, and early advancement to solid food are the cornerstones of Mobile Team nutrition teaching.

The third major area of public health activity is an attempt to change health attitudes. A health program is broadcast in Loma and Kpelle over the local radio, a newsletter on health topics is printed in English and distributed as widely as possible, and a completely pictoral midwifery education text for the country midwives is in the process of being written. Teaching and attitude change really constitute the guts of the public health effort. Every woman taught proper nutrition represents fewer malnourished children; every pit latrine represents less parasitic disease; every country midwife who uses a sterile technique for tying umbilical cords represents less tetanus neonatorum. Attitude change is where the ultimate payoff lies, but research into the psychology of attitude change in relatively primitive populations is just now beginning. Whether communication research in this field can fulfill its enormous potential remains to be seen.

A NATIONAL PERSPECTIVE

At the national level, Liberia illustrates the fact that commitment to a Western mode of medicine can create real handicaps to further development of health systems. Of a total annual budget of 100 million dollars, Liberia spends approximately 7 million on health. Five dollars per person per year is quite high by African standards, but clearly one measures impact not by the number of dollars spent but rather by the manner in which they are spent.

The government runs a hospital in each of the nine Liberian counties. In addition there are nine concession hospitals run for the benefit of the employees of mining and rubber concessions, and there are five mission hospitals. The country has a well-thought-out health care development plan which calls for a network of health posts manned by practical nurses in all strategic villages. Five such health posts would be supervised by a medical assistant in a "health unit." All the health units in a county would then be supervised by a physician.

The progress of this development program has been hampered by a shortage of funds caused by the increasing costs of crisis care throughout the country. For example, the John F. Kennedy (JFK) Medical Center in Monrovia is a modern, five-story facility that would be the envy of any American community. It was built in 1970 by US-AID, and its annual operating costs now account for one-half of the annual health budget. The Methodist and Lutheran missions have put themselves in a similar situation. In 1965 they cooperated with the government to build an appropriately sophisticated 68-bed hospital intended to function as a replacement for Curran Hospital and as an up country referral center. It was named Phoebe Hospital, and its minimum estimated operating budget for the next year is $600,000. In contrast, Curran's budget for next year is $145,000. The patients at JFK and Phoebe undoubtedly receive better care than at the bush hospitals, but in a situation where the need for any medical care is so great, it certainly can be argued that some unknown percentage of more or better care is not worth the cost. Neither the government nor the missions can now afford to support Phoebe, but the decision to cut
their losses and start again will prove extremely difficult for the government and the missions to make.

Added to the basic funding problem is a massive inequality in the national distribution of physician services. Seventy-five percent of the physicians in Liberia are practicing in or around the greater Monrovia area, which contains about 10% of the population of the country. For the most part, physicians are attracted to areas where there exist both the facilities and finances necessary to support a style of medical practice commensurate with their training. The presence of JFK in Monrovia is undoubtedly a centralizing influence that the government has yet to take steps to counteract. The Dogliotti Medical School, which uses the facilities of JFK, graduated its first class of four students last year. It remains to be seen if these Liberian trained M.D.'s will practice up country. Since the missions are phasing out their support and trying to Liberianize their operations as much as possible, the government will soon have to take more active steps to encourage physicians to practice outside of Monrovia.

Thus, the government is faced with the difficult task of maintaining a relatively expensive and uncoordinated system of crisis care medical facilities, assuming functions that the medical missions have traditionally served, putting more physicians in the country with the people, and developing a village-oriented health care delivery system in the midst of a world-wide recession. One encouraging note is that United States international aid is catching up with the times. US-AID is now organizing a county health program in Lofa County that will hopefully serve as a model for the rest of the national health development plan. Ten years ago US-AID would simply have built another hospital. Another hopeful sign is that the mission hospitals are finally organizing to coordinate their Community Outreach programs, and to form a central dispensary for the bulk purchase of commonly used drugs and supplies (4).

In summary, Western medicine in Liberia presents a diverse picture. There are sophisticated medical centers, essentially indistinguishable from United States facilities, and small bush hospitals where medical care is placed quite directly into the context of another culture. Liberia suffers from some of the same problems as American medicine, such as a crisis orientation and a maldistribution of services. Yet these problems are being attacked and, unlike the United States, the Liberian health care system is small enough that there exists the potential for quite rapid change. The question is whether the necessary funds and expertise will be brought to bear. If so, then perhaps the U.S. will be able to learn from Liberia as our own more ponderous system slowly changes.

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