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THE PROBLEM OF COMMUNICATIONS IN MEDICAL PRACTICE IN EAST AFRICA

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PERHAPS it is salutary for those of us who live in the luxury of Nairobi to consider for a moment the medical problems at the periphery. It goes without question that the centre has to be built up first in order to train staff for the district hospitals; Kenya cannot afford to do everything at once and we must accept this as a priority in this stage of our development—hence the development of our University and the extensions to the Kenyatta National Hospital. Health has never been considered a priority, either pre- or post-independence, and therefore the proportion of the budget spent on the health services is still small. You cannot eat health and you cannot sell or export it, and therefore the economists have managed to persuade the politicians that it has a low priority. Education, Agriculture, Communications and even the Tourist Trade are rated higher, and indeed it is arguable that this should be so for the present. Little notice is taken of the argument—admittedly difficult to prove—that production would go up if we had a healthier population. However, unless we produce more we shall not be able to pay for the social services for which everyone is clamouring. What are the problems at the periphery and to what extent do communications add to the difficulties?

The Geographical Problem. The problem of distance is not great in the third of Kenya which is highly populated and more developed. But in two-thirds of the country, which is largely waterless bush, there is a big problem. These areas are relatively sparsely populated. Turkana, where 160,000 people live, is roughly 250 miles long and 120 miles across. It has one main government hospital at Lodwar, run very well by a clinical assistant, and there are about a dozen beds at Lokitaung run by a medical assistant. In addition, there is a mission hospital at Lokori in southern Turkana in the charge of a doctor, and a mission hospital in Kakuma in the north where a doctor is expected before long. During long periods in 1968 there was no doctor in Turkana at all, as the doctor in Lokori was on leave. Roads are often impassable in the rains and often rough, and there is no telephone.

The Population Problem. With the population rising by 3.5 per cent per year, the economic development is constantly swallowed up by increasing numbers. One has to run even to stand still.

The Equipment Problem. Equipment in these peripheral hospitals is often of a low standard. For instance there is no X-ray plant in Turkana, and laboratory facilities are rudimentary. This is largely due to lack of finance.

The Staff Problem. It is often difficult to get staff to work in these areas because of the isolation and lack of facilities. Staff feel that posting to these areas is a penal sentence and that they will be overlooked when it comes to promotion.

Possible Answers. Communications are at the root of the problem; improve communications and you solve much of the problem. Radios enable the man at the peripheral hospital to talk to the centre and discuss his problems and, hopefully, get some advice. This radio link gives him the feeling he is part of the human race again and not totally separated. He can call up if he runs out of essential drugs or has an emergency on his hands. The Flying Doctor Service does 1300 of these radio exchanges in a month.

However, if improved communications simply enables the man to "pass the buck," then little is accomplished. It should not be used as an excuse for failing to give a blood transfusion because it is easier to call up Nairobi and evacuate a patient or get some blood sent up. It is not easy to draw the line in such cases but I think you will see the potential trap into which one can be led, and any such use of the service will only lead to an over burdening of the service at the centre.

Then we can increase communications in these areas under discussion by using light aircraft which have a number of useful functions:

1. They can evacuate a patient who needs treatment at a provincial centre or in Nairobi.

2. Medical staff can be flown up to deal with specialist cases.

3. Supplies in the form of drugs, blood, etc. can be sent by air when necessary.

By using these forms of modern communication it is possible to make better use of medical personnel. For instance, a place like Lodwar does not warrant a full-time surgeon, but it is possible to fly up a surgeon on regular visits to deal with a large proportion of surgical cases.

Another example of the beneficial use of communications is the help the Flying Doctor Service gives to leprosy work in Tanzania. The main leprosaria have been put on the radio network, and co-ordination of policy, arranging of courses and other administrative matters can be dealt with expeditiously instead of waiting perhaps a month for an answer to a letter. Furthermore, Dr. Wheate, the Government leprologist, is taken round the leprosaria once or twice a year by air, saving many weeks of wasted time on the road.

The Flying Doctor Service is operating a pilot scheme from Arusha whereby a doctor, who is also a pilot, visits a group of 16 rural clinics every 2 weeks. He works in an area 250 miles across as a general practitioner and brings medical care to areas which seldom saw a doctor before. He also transports the regional health authorities and plans preventive medicine campaigns with them, while the African nurse who accompanies him runs maternity and child welfare clinics. It is too early to analyse the economics

of this scheme but, if it continues to prove successful and can be done at a reasonable cost, it could be copied in other parts of the country.

This type of approach has, of necessity, certain drawbacks. It is only an adjunct to existing services and does not solve the whole problem. When there are sufficient facilities and staff on the ground, much of this will be unnecessary, though this is unlikely to be for some time. Two horrible drawbacks should be considered. First the problem of follow-up. Surgical operations should not usually be done in places where there is inadequate staff to follow the course of the case subsequently. The radio is a help, as discussions can take place and consultant advice given in the post-operative period. Often, however, the staff are capable of the post-operative treatment when the surgeon leaves and it has to be left to the judgment of the surgeon as to how he should proceed. Secondly the problem of expense. Is it justified to spend money in this way when money is short? This is a difficult question to answer and probably one on which there would be much difference of opinion. I remember some 20 years ago going to see the D.M.S. and asking permission to take a mobile unit up to Turkana. His answer was "No, you will only come back and tell us there are a lot of sick Turkana, and we can't cope with the sick people we have already". I appreciated his sentiment but I can't say I think it was much of an answer. What he really meant was that he could not afford to take on more sick people. However, if you live at the periphery and pay your taxes, you probably feel that you have an equal right to a slice of the cake, however small it may be.

The aircraft of the Flying Doctor Service operate at Shs. 230/- per hour, or 1/61 per mile, or 26 cents per seat mile, which is approximately what a Land Rover costs per mile. However, if you were to drive to Lodwar it would take you two days, as against 2 hours by plane. If you have a doctor on board you must take into consideration the cost of his time. Road travel to these places is expensive and wasteful of doctors' time. Further, it is doubtful whether a surgeon who has travelled by road to Lodwar would feel fit to operate on arrival!

The 1968 annual report of the African Medical and Research Foundation shows that 2,118 operations were performed at a cost of £K11.10 per operation; this includes all the flying, administrative expenses, doctors' salaries, etc. 300 specialist cases were also seen and treated. One can hardly call this expensive by any standard. I doubt whether it would be possible to produce lower figures for an operation in Nairobi.

I believe, therefore, that a good case can be established for modern communications when properly used. I would like to see much more preventive medicine being undertaken, with emphasis on vaccination campaigns, basic problems of water supply and other fundamental issues essential to healthy living. I am sure many people have seen a dispensary or hospital on the top of a hill doling out antibiotics; when you ask to see the water supply at the bottom of the hill, you realise why the antibiotics are necessary. We all know that it would be less expensive and more sensible to deal with the water supply before supplying the antibiotics. Communications can be

used to bring preventive medicine campaigns to the periphery and this is something we must afford.

OTHER PROBLEMS AFFECTING THE FLYING DOCTOR SERVICE

The Problem of Returning the Patient after Treatment. This is a thorny problem bristling with emotional overtones. A.M.R.F. takes the view that, when possible, patients should make their own way home, particularly if they are fit. We are often told that it is our job to take the patient home as we were responsible for bringing him in in the first place. This may seem reasonable, but, if we agree to fly fit patients, we would not be able to fly so many sick ones. It is essentially a matter of money, and as a voluntary agency which is not paid for its services, we feel this chore must partly be borne by government transport including the Kenya Air Force and the Kenya Police Airwing. I am well aware of the frustrations caused by the occupation of beds by patients waiting for repatriation; one answer is to build a hostel for them while they are awaiting repatriation and A.M.R.F. is co-operating with Government in an attempt to achieve this.

Weather. Fortunately this is not as much of a problem as one might think. Sometimes delays are caused by low cloud, but it is seldom that an aircraft does not get to its destination, even if sometimes it is late.

The hours of darkness present problems in peripheral areas where there is no flare path. We have experimented with providing flares so that we may land at night, notably in the Mombasa road area where road accidents are frequent. Aircraft can return to Nairobi and a few other major centres after dark because flare paths are available.

The Airstrip. In most places small airstrips are easy to make. We have made about 80 now in East Africa and this has never cost a single penny. The local people, after the objectives have been explained to them, usually turn out and flatten the necessary piece of ground. We try to make the strips 1,000 yards long and 25 yards wide, facing into the prevailing wind and with good approaches. We don't always succeed and it can be a battle to keep them maintained, but we have now flown almost a million miles out of indifferent strips without loss of life or limb, and only one minor accident, when binding brakes caused the aircraft to swerve off the strip and damage an undercarriage.

Emergencies. Air travel really comes into its own when it is a question of dealing with an emergency. It is four to five times quicker than by road and the patient's comfort is usually much better in an aircraft. We are often asked why we don't use helicopters for emergency evacuations. Basically, the answer is that we would if someone gave us the machine and the money to run it. However, the helicopter is still expensive in comparison with fixed wing aircraft; it is expensive to buy, expensive to maintain, cannot travel far without refuelling, does not carry a large load, has a high accident rate, is noisy and doesn't operate well at a high altitude. Nevertheless it is perfect for picking

up the casualty from an accident on the Mombasa road and flying direct to a hospital. Its potential has been fully demonstrated in the evacuation of wounded in the Vietnam war.

Rural Development

I would like to mention an additional and unplanned benefit which we have often noticed once an airstrip is opened up; one finds rural development occurring alongside it. A trading post starts, and people come to live near the strip and form a village. Then a school and a dispensary start and so on. New people come to visit the area—the agricultural officer, the vet, the police and sometimes even the politicians—and gradually the area begins to d[illegible], with the airstrip as the nucleus.

CONCLUSION

There are many difficulties involved in medical practice in the rural areas of Kenya, but it can be seen that communications can provide part of the answer. The Flying Doctor Service does not claim to have done anything except explore some of the possible answers. We are well aware that often they are not ideal; many of our methods will be discarded as new methods and techniques are thought out. In the meantime we hope to have the privilege of continuing to organise this service so that it can become increasingly valuable within the total health service of the country.