Major Problems in Delivering Health Services to Sahelian Nomads

In view of the complexities of life style of nomads, it is easy to understand why the delivery of health services to them poses serious logistical problems. However, as initial pilot studies demonstrated, logistics are not the only problem. The four major areas of difficulty defined in these studies aside from the logistical ones are as follows:

1. Nomads are generally unfamiliar with the services being offered. Consequently there is little consumer recognition of the desirability of the services.

2. Nomads view themselves as a separate polity and deal with government in the spirit of an equal, much the same as they deal with other ethnic groups. Their view of government has historically been that of an adversary, a view which still persists. Both colonial administrations and the governments of independent African states have modified the traditional life style of nomads in a profound fashion by putting an end to serfdom and slavery and by severely punishing pillaging and by actively preventing it. Such measures have been against the best vested interests of the ruling power structure of nomadic groups and have over the years resulted in their loss of wealth and an erosion of their power and prestige. As a consequence, nomads are not overly friendly to nor cooperative with government and government associated activities.

3. The most intense contacts between nomads and governments in the past several decades have occurred during the collection of taxes. Taxes are and have been levied not only on each adult member
of a family but also on every declared head of livestock. Nomads have experienced little or no tangible benefits from such annual taxes since most of the monies go to support the machinery of modern government and to provide government services from which they are far removed. They have avoided paying taxes in several ways. Births are often not reported and deaths reported where none have occurred. Roughly only 10 per cent of existing livestock is declared for taxation purposes and every attempt made to avoid both a human and livestock census. All government agents are suspected of being tax collectors, even health workers. This is understandable since in the past government tax collectors used any number of disguises and often attached themselves for convenience to mobile health teams. Therefore, the routine registering of names and the counting of people during the delivery of health care is viewed as an attempt at census taking for taxation purposes. Nomads now avoid the annual groupings which were once held to celebrate the end of the rainy season. During these celebrations large numbers of nomads gathered with their herds at either river crossings or around salt licks. But eventually so did the tax collectors. In the eyes of the nomads, taxation is pillaging carried out by a superior force, government. It is inconceivable to them, therefore, that government would be interested in their health and welfare.

4. For the same reason nomads avoid traditional congregations of any size, they also avoid assembling at a given point or at a given village in order to receive a health service. The use of assembly points of delivering health services is successful in areas of extremely high population density and among sedentary populations. But among sahelian nomads it has consistently been a
failure. Aside from their unwillingness to assemble in this fashion for fear of taxation, nomads are also unwilling to assemble in the villages of sedentary farmers. And for their part, the sedentary farmers are unwilling to permit such assemblage. Thus, attempts at assembling nomads in one place for the purpose of delivering a health service have generally been unsuccessful.

The logistical problems are not difficult to imagine given the nature of nomadic pastoralism. The low population density of the sahel and the dispersion of small groups of people in temporary positions over a wide geographic area necessitate the use of mobile teams. Vehicular travel around the sahel is easiest during the dry season, October through June. Nomadic populations are most accessible during the end of this season when diminished water and pasture resources force them to remain at their last dry season camps for a considerable period of time. This is a time when nomadic population congregation is greatest. The rainy season and the early months of the dry season are demographically characterized by dispersion since water and pasture are abundant.

Thus, although it is possible to reach nomads throughout the dry season, their concentration at given sites in May and June makes this period ideal from a cost benefit point of view for delivering a given service.

Experiences in Delivering Health Services to Sahelian Nomads Prior to the Drought

Short term and long term goals

Short term and long term goals were established at the outset and mass campaigns chosen as the technique for achieving some of the short term goals. The short term goals were:
1. The delivery of smallpox, measles and yellow fever immunizations and rudimentary curative medical services by polyvalent mobile teams.

2. A firm demonstration of the complete separation of health service delivery and tax collection.

3. Health education in basic principles of environmental sanitation and personal hygiene.

The long term goals were:

1. The extension of general health services to the nomadic population.

2. The frequent and routine use of fixed curative medical facilities by the nomadic population.

**Strategy**

Given the complex nature of nomadic movements, existing attitudes towards health programs and the rudimentary structure of general health services in the sahel, the mass campaign technique was chosen as the means of achieving both the short term and long term goals. It was fully appreciated that mass campaigns are in a sense both temporary and expedient, a step in the direction of achieving the long term goal of developed general health services. In both the savanna and sahel of West Africa, mass campaigns are indispensable in delivering various types of health services at the present time. They are not an antagonistic approach compared to general health services. Rather the two complement one another and eventually their activities should be merged. Once the general health services structure of the sahel is more fully developed, mass campaigns will become less necessary.
Mobility then was critical in reaching the nomads. Therefore, mobile teams were created, capable of traveling by truck into all of the regions traversed by the nomads. Given the size of the sahel and the low population density, it was decided that the cost of reaching nomads could be kept to a minimum by executing the campaigns during the months of maximum concentration, April-June. These months are also the period when vehicular travel in the sahel is easiest. In order to achieve greater efficiency and to avoid the difficulties which might arise from associating the nomadic and sedentary populations, mobile teams directed their activities only to the nomadic populations where appropriate. Separate mobile teams delivered similar services simultaneously to the sedentary agricultural population.

Mobile teams were to deliver their services to all nomads in the area where they were sent to work, regardless of the country of which the nomads either considered themselves nationals or were considered to be nationals. In the past, mobile health teams passed by those nomadic groups who stated they were nationals of a neighboring state. The prevailing philosophy was that the health ministry of the neighboring state should take care of its own nomads. The nomads, always suspicious of surreptitious attempts at tax collecting, generally declared themselves nationals of a neighboring state, never the one in which they were contacted.

Conclusions Drawn from the Delivery of Health Services to Nomads in the Sahel Prior to the Drought

The low population density of the sahel, the dispersion of nomads over a wide geographic area and the long distances between individual nomad camps necessitated the investment of man hours and
and gasoline far in excess of those invested in campaigns of sedentary farmers living in the same areas. In one program conducted in Mali for both nomads and sedentaries living in the same geographic zone, a comparison of costs and resources was made between the two sets of medical teams established. The operational costs for the program for nomads was eleven-fold more than that for the sedentary agricultural population.

The Short Term Effect of the Drought on the Delivery of Health Services to Nomads in the Sahel

As is well known now, the effects of the drought were first felt by the pastoral nomads, the Tuareg and the Maure. With inadequate rains in 1972, pasturage became scarce. Although there was adequate water in most wells in late 1972, there was little or no pasturage around the wells. What was present was rapidly consumed by livestock herds leading to a situation wherein there was adequate water but no fodder. The situation grew progressively worse in the early months of 1973, a time when many animals died of starvation. Some herds drove their herds southwards into the savanna of Upper Volta and as a consequence saved a considerable proportion of their livestock. Others, however, waited around the wells or along the Niger, hoping for the rain which would generate pasture. Those rains never came and as a consequence most herds were decimated. Many nomads were stranded around wells and unable to leave because their donkeys had died. It was reported by many officials that the donkeys were among the first animals to die.

Because they are the primary means used by the nomads for transporting tents, possessions and water, the nomads were unable to move into administrative centers, even though they wanted to.
Camels and cattle also died in large numbers in early 1973, followed by sheep. Of all the livestock species, goats proved to be the most resistant and for the most part managed to survive where there was minimal fodder.

Those Tuareg males who drove their livestock south beyond the traditional migration orbits left their wives and children behind. Other males, who lost all of their livestock sent their wives and children into administrative centers and migrated south into Nigeria where there are now large numbers of them. Malian officials claim that these men migrated with the hope of finding food to bring back to their families or else cash employment which would enable them to buy food.

Among many stranded families the situation progressively grew desperate. There are many documented instances where nomads ate the leather of their own tents and sandals. Under these extreme circumstances many children were abandoned by their parents.

Once the gravity of the situation was fully known, the Malian Government organized a program to bring the stranded nomads into what are now called Camps des Sinistres. The physical transport of nomads from isolated sahelian wells was undertaken by the Malian army. These camps were established at either administrative centers or else at important wells where nomads habitually congregate.

The population size of these camps gradually grew as more and more nomads lost their herds. Segments of the sedentary population also entered them after their grain reserves had been exhausted. There was no existing administrative infrastructure in Mali to deal with the influx of tens of thousands of starving
refugees into camps. Nor were there the necessary food resources
to feed them.

The settlement of large numbers of sahelian nomads in
refugee camps throughout the sahel has brought this population
into intense contact for the first time with the existing health
care delivery systems. In most of the larger camps dispensaries
have been established which are delivering medical services equal
to and in many instances more varied and of higher quality than
those being delivered in rural dispensaries serving sedentary
populations of this same area of Africa. Nomadic populations
which were heretofore inaccessible and beyond the reach of most
health service delivery systems are now being exposed to these
systems and to the services which they have to offer. The
immediate effect, therefore, of the drought has been that nomads
have for the first time become recipients on a large scale of
modern preventative and curative health services. They have also
received rudimentary exposure to health education programs addressing
themselves to raising levels of personal and environmental hygiene.
Also, nomads have experienced in a very dramatic way the benefits
of modern medical care. All of this has had an immediate effect
on their attitudes toward modern medical care.

In summary then, the immediate effect of the drought on the
delivery of health services to nomads has been:

1. To bring large numbers of nomads into the delivery
   system.

2. To demonstrate the advantages of the services which
   the system can deliver.
3. To improve general levels of health and well-being.
4. To modify attitudes toward modern medical care.
5. To raise levels of environmental and personal hygiène of nomads.

Long Term Effects of the Drought on Delivery of Health Services to Nomads in the Sahel

Whether or not nomads resume their pre-drought lifestyle, it is fairly certain that a large proportion of them, having experienced the health services which are available, will avail themselves of these services. They will avail themselves of these services whether they are delivered in fixed curative facilities, such as dispensaries, maternal and child health stations and hospitals, or by mobile medical teams dispensing immunizations and prophylactic medications. The net effect of this will be to raise general levels of health in the Sahel, to decrease morbidity and to decrease mortality.

Pascal James Imperato, M.D.