A PROFILE OF TRADITIONAL HEALERS IN AN AREA HARD-HIT BY THE AIDS EPIDEMIC: KAGERA REGION, TANZANIA

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August 17, 1995

This paper contains preliminary results of the research project on "The economic impact of fatal adult illness due to AIDS and other causes in Sub-Saharan Africa", sponsored by the World Bank, USAID and DANIDA. The research team includes Mead Over (principal investigator, World Bank), Martha Ainsworth (World Bank), Phare Mujinja, Godlike Koda, Innocent Semali and George Lwihula (University of Dar es Salaam, Tanzania), and Indrani Gupta (World Bank). The opinions expressed in this paper are those of the authors and do not necessarily represent the positions of the World Bank or its members. The authors are grateful to Kathleen Beegle, Stefano Bertozzi, Susan Hunter, Eustace Muhondwa, Mead Over, and Wendy Roseberry for comments on an earlier draft and to Jim Shafer for hand tabulating open-ended responses.

CONTENTS

1. Introduction

Throughout Sub-Saharan Africa, traditional medical practitioners are often the most accessible source of medical care, particularly in rural areas where modern care is relatively scarce. Even in urban areas their skills are sought out for specific afflictions (WHO 1990). Traditional practitioners provide medical services to much of the population and are often more accessible and better known to communities than modern healers. They also have established reputations for curing certain ailments, such as broken limbs. With these advantages, there has been growing interest in bringing traditional practitioners into the formal health system so as to help ensure a basic level of primary health care to all citizens (Dejong 1991, Heggenhougen and Sesia-Lewis 1988, and World Bank 1994).

Traditional practitioners are also a potentially important resource in coping with the HIV/AIDS epidemic. Many patients, aware that the modern medical sector has no cure for HIV/AIDS, have turned to herbalists, spiritualists and other healers for treatment. Traditional practitioners are also potentially important sources of information about the transmission, prevention and treatment of AIDS and related infections. Of equal concern is the extent to which any practices might be aiding in HIV transmission or putting the practitioners themselves at risk of acquiring HIV/AIDS. However, little is known about their practices in general, or specifically what they know with respect to transmission and prevention of HIV/AIDS. There are amazingly few systematic studies of the background characteristics and practices of these healers (see Erinosho and Ayonrinde 1984 for an exception). More recently, surveys of their knowledge, attitudes, beliefs and practices (KABP) have been launched in several African countries, although the degree of representativeness of the samples varies (Chirwa and Sivile 1989, King et al 1992, WHO 1990).

This paper presents the results of a survey of the background, knowledge, practices and clientele of 103 traditional healers in the Kagera Region of Northwestern Tanzania. Since the first case of AIDS was diagnosed in Kagera in 1983, the epidemic has raised adult mortality, orphanhood and the demand for social services. As of 1987, roughly a quarter of adults in the most productive age group were infected in the regional capital, Bukoba, and almost one in ten adults in the surrounding districts (Killewo et al 1990). The AIDS epidemic has greatly increased the demand for medical care in Kagera, due both to terminal in-patients as well as to those with opportunistic infections that can be treated on an outpatient basis. The growth in HIV/AIDS patients has also reduced the resources available for other more treatable conditions, such as malaria. Thus, the potential contribution of traditional practitioners in the prevention of HIV and treatment of terminal AIDS patients in Kagera is large. According to the results of the household survey, of which the healer survey was a part, 6 percent of those with an illness episode in the past 4 weeks consulted a traditional practitioner. Among a sample of 52 adult deaths (age 15-50) in these households, 13 percent of the deceased were reported by surviving household members to have consulted a healer for the condition that led to their death.[1]

The next section of the paper briefly describes the selection of the sample of traditional healers and the larger household survey for which the information was collected. The subsequent sections present results on: background characteristics; areas of expertise and the cost and effectiveness of treatment; facilities and equipment; prescriptions and referrals; and the knowledge of the healers regarding the transmission, prevention and treatment of HIV/AIDS. The final section summarizes results.

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1. Data on traditional consultations for illness are from the first of four interviews; information on traditional medical consultations before death was available from the third and fourth interviews only.

2. Sample selection

The traditional practitioners described in this paper were interviewed as part of the Kagera Health and Development Survey (KHDS), a four-wave longitudinal survey conducted from 1991-93 of over 800 households in 51 villages or urban neighborhoods in the Kagera region of northwestern Tanzania. The objectives of the KHDS were to measure the economic impact of adult deaths and to design cost-effective policies to assist the survivors in coping with the impact of illness and death caused by the AIDS epidemic (Over, Ainsworth, Mujinja et al 1989).[2] The household survey was a stratified random sample of households. For the purpose of explaining the sampling of traditional practitioners, we need only describe the selection of clusters of households. In the first stage, census enumeration areas for the entire Kagera region were classified into eight categories based on their geographic location and, within each location, their mortality rate for adults 15-50 in the same ward in the 1988 census. This established, for each of four geographic zones, two groups of communities — those in wards with the highest and the lowest adult mortality rates. In the second stage, within each of these eight cells, enumeration areas, or clusters, were randomly selected for participation in the household survey, with probability proportional to population size. A total of 51 clusters were selected across the eight cells.

During the third wave of household interviews (January-June 1993) a special questionnaire was administered to two traditional medical practitioners in each of the 51 areas where households were surveyed, in order to better understand the quality and availability of health services to these households. A comprehensive list of all traditional practitioners (including traditional birth attendants) was obtained from community informants in each cluster and, from this list, two were selected at random for interview in each cluster.

A total of 317 traditional practitioners were enumerated during interviews with community leaders, with between 2 and 13 recorded per cluster. Of the 317 practitioners enumerated, 103 (32.5 percent) were interviewed using the questionnaire in Annex 1.[3] All of the selected practitioners agreed to participate. This paper presents the (unweighted) results for this stratified sample of healers.[4]

3. Background characteristics of the traditional practitioners

Almost two-thirds of the sample of traditional practitioners (62 percent) were female (see Table 1). They ranged in age from 18 to 89 years, but were generally quite old. The mean age was 62.8 years, and two-thirds were 60 or older.

The sample on average had 3.2 years of formal schooling (see Table 2). Only one-third of the sample (33.9 percent) reported any formal schooling, and those 50 or over had less formal

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2. For an overview of the objectives, survey design and household questionnaire see Ainsworth et al 1992.

3. Technically, only 102 practitioners should have been selected. However, in one cluster the zealous field workers interviewed a third.

4. Because of stratification, the results for this sample of practitioners may not be the same as those for a random sample of all traditional practitioners in the Kagera region. To generalize these findings for practitioners in the region, the results should be weighted according to the stratification weights used for selecting clusters and, within clusters, the probability of each practitioner being selected within that cluster. The distribution of the sample of healers by district is as follows: Bukoba Rural, 35; Bukoba Urban, 22; Muleba, 16; Ngara, 12; Karagwe, 10; and Biharamulo, 8.

Table 1. Distribution of traditional practitioners by age and gender

	Gender			
Age	*Male*	*Female*	*Total*	*(Percent)*
<40	5	2	7	6.8
40-49	4	5	9	8.7
50-59	5	14	19	18.5
60-69	6	26	32	31.1
70-79	9	13	22	21.4
80+	10	4	14	13.6
TOTAL	39	64	103	100.0
(Percent)	37.9	62.1	100.0	

schooling than those under 50. However, because roughly a quarter of those 50 and older received secondary schooling or higher, they had more schooling on average (3.3 years) than their younger counterparts (2.9 years).[5] A higher percentage of female than male practitioners had formal schooling (35.9 vs. 30.8 percent, respectively) and almost one third of all of the female practitioners reached secondary schooling or higher. Thus, on average, female practitioners had twice the schooling of male practitioners (4 vs. 2 years, respectively).

The healers started their practices as far back as 1925 and as recently as 1993. More than half started their practice before 1960 and the mean time in practice was 32.8 years. They were asked to report up to three specialties. Thirty percent had one specialty, 47 percent had two

Table 2. Distribution of healers by age, gender and completed schooling (percent)

	Age		*Gender**		
Completed schooling	*<50 (n=16)*	*50+ (n=87)*	*Male (n=39)*	*Female (n=64)*	*Total (n=103)*
None	50.0	55.2	53.9	54.7	54.4
Adult education	6.3	12.6	15.4	9.4	11.7
Primary	25.0	5.8	18.0	3.1	8.7
Some secondary or more	18.8	26.4	12.8	32.8	25.2
Total	100.0	100.0	100.0	100.0	100.0
Mean years of schooling	2.9	3.3	2.0	4.0	3.2

*. The differences in the distribution of schooling by gender are statistically significant (p=.01).

5. The distribution of healers across levels of education is skewed at the low and high ends of the schooling distribution, compared with the general population. For example, while half or more of healers have no schooling, only 14 percent of adults 18-49 and 37 percent of those 50 and older are not schooled in the general population. However, the healers are far more likely to go to secondary school; in the general population, only 8 percent of those 18-49 and 2 percent of those 50 and older attended secondary school (compare with Table 2).

Table 3. Distribution of healers by specialization and gender

Specialization	Percent reporting as first specialty[a]			Percent reporting as one of several specialties		
	Male (n=39)	*Female (n=64)*	*Total (n=103)*	*Male (n=39)*	*Female (n=64)*	*Total (n=103)*
Herbalist	56.4	76.6	68.9	87.2	95.3	92.2
Birth attendant	0.0	3.1	1.9	7.7*	64.1*	42.7
Bone setters	12.8	14.1	13.6	33.3	26.6	29.1
Spiritualists	20.5	3.1	9.7	41.0*	7.8*	20.4
Circumcizers	5.1	0.0	1.9	5.1	0.0	1.9
Snakebites	5.1	0.0	1.9	5.1	0.0	1.9
Other[b]	0.0	0.0	0.0	2.6	3.1	2.9
No specialty	0.0	3.1	1.9	-	-	-

a. The difference in distribution of specializations by gender is statistically significant at p=.006.
b. Includes mental disorders (1), gynecological problems (1) and dengue fever (1).
* The difference between the share of men and women in this specialty is statistically significant at p=.000.

specialties, and 23 percent had three. Table 3 presents the distribution of healers by main specialty and the percent reporting a specialty as one of three. Over three-quarters of the female healers and more than half of the male healers reported their major specialty as herbalist. Roughly equal percentages of healers of both genders reported bone setting as a first specialty (13-14 percent) or as one of several specialties. However, males were much more likely to be spiritualists (20.5 vs. 3.1 percent) and no females engaged in circumcision. Interestingly, very few female healers reported birth attendant as a main specialty, but almost two-thirds reported it as one of several. Aside from these declared specialties, 49 healers (47.6 percent) perform deliveries. Of these, 91.8 percent were females.

There are no formal colleges for training traditional healers. Most of the healers inherited their practice or were trained by their parents (72 percent). Others apprenticed with healers (10 percent), obtained knowledge through spiritual revelations (10 percent), or learned from other trainers (9 percent). In addition to their medical practice, all of the traditional healers were engaged in agricultural activities and 13 percent were engaged in another occupation as well, generally a full-time job.

4. Conditions treated, cost and effectiveness of treatments

Over three-quarters of the healers offered treatment for fevers, gynecological problems and diarrhea, and they claimed a high degree of effectiveness in treating these conditions. By contrast, very few healers (4.9 percent) offered treatment for AIDS, and among those six healers, half claimed to be rarely or never effective and two others only sometimes effective. The small number treating AIDS patients is quite remarkable in light of the very high prevalence of HIV/AIDS in both urban

and rural Kagera. However, it is also the case that many of the conditions treated by healers can be in fact opportunistic infections for AIDS — namely fevers, diarrhea, skin rash, STDs and mental illness. There are statistically significant differences between the proportion of male and female healers treating fevers, gynecological problems, mental illness, dengue fever, spirits, witchcraft and AIDS. Women are more likely to treat fevers, including dengue fever, and gynecological problems, while men are more likely to treat mental illness, spirits, witchcraft and AIDS.

The traditional healers are very much aware of problems affecting their communities. Among the five most important health problems, they listed malaria (87 percent), AIDS (57 percent), intestinal parasites (28 percent), diarrhea (26 percent) and malnutrition (10 percent). Some but not all of these conditions were within the reported expertise of the healers, as revealed in Table 4.

Table 4. Percent of healers who treat common conditions, by gender and perceived effectiveness of treatment

	Percent who offer treatment			*Among those who treat, effectiveness of treatment*			
Condition	*Male (n=39)*	*Female (n=64)*	*Both (n=103)*	*Always effective*	*Sometimes effective*	*Rarely or never effective*	*n*
Fevers	69.2*	95.3*	85.4*	70.5	28.4	1.1	88
Gynecological problems	61.5*	95.3*	82.5*	78.8	20.0	1.2	85
Diarrhea	74.4	79.7	77.7	68.4	31.7	0.0	79
STDs	53.9	64.1	60.2	66.1	32.3	1.6	62
Skin problems	53.9	62.5	59.2	67.2	31.2	1.6	61
Respiratory conditions	53.9	51.6	52.4	53.7	44.4	1.9	54
Musculoskeletal problems	46.2	54.7	51.5	58.5	34.0	7.6	53
Gastrointestinal problems	51.3	46.9	48.5	58.0	38.0	4.0	50
Fractures	48.7	39.1	42.7	77.3	22.7	0.0	44
Cardiovascular problems	38.5	37.5	37.9	53.9	35.9	10.3	39
Mental illness	53.9*	25.0*	35.9*	70.3	21.6	8.1	37
Asthma	33.3	29.7	31.1	43.8	40.6	15.6	32
Convulsions/epilepsy	2.6	10.9	7.8	75.0	25.0	0.0	8
Snakebite	10.3	3.1	5.8	100.0	0.0	0.0	6
Dengue fever	0.0*	9.4*	5.8*	50.0	50.0	0.0	6
AIDS	10.3*	1.6*	4.9*	0.0	40.0	60.0	5
Spirits	10.3*	1.6*	4.9*	100.0	0.0	0.0	5
Witchcraft	10.3*	1.6*	4.9*	80.0	20.0	0.0	5
Others[a]	15.4	9.4	11.7	91.7	8.3	0.0	12

* The difference in the percent of healers treating this condition by gender is significant at $p <= .05$.

a. Others include malnutrition, eye problems, cramps, intestinal parasites, communicable diseases, hemorrhaging, diabetes, abscess, anemia, headache, and others.

Table 5. Distribution of healers according to the number of new patients in the past 7 days and gender of healer

Number of new patients	*Gender of the healer*		
	Male (n=39)	*Female (n=64)*	*Total (n=103)*
None	30.8	18.8	23.3
1-4	41.0	40.6	40.8
5-9	15.4	28.1	23.3
10 or more	12.8	12.5	12.6
TOTAL	100.0	100.0	100.0

The healers were asked to recall the number of new patients they had treated in the past seven days. Since few if any of the healers keep patient records, it was thought that using a seven-day recall period would reduce the recall bias. Roughly a quarter of all healers had no new patients in the 7 days before the interview and 41 percent had between one and four patients (see Table 5). Female healers were more likely than male healers to have had any new patients, but this result was not statistically significant.

On average, healers saw 5 new patients in the 7 days before the survey, but the number ranged from zero to 57 new patients (see Table 6). Female healers saw, on average, more new patients than did male healers (5.2 vs. 4.6, respectively) and they saw more children and female patients. Healers of both genders were far more likely to be consulted by patients in the prime adult years than by children or the elderly, and both were more likely to be consulted by females than by males.

Altogether, this sample of 103 traditional practitioners treated 518 new patients in the past 7 days, of which more than two-thirds (68 percent) were female. Roughly a quarter of the new patients

Table 6. Mean number of new patients in the past 7 days, by age and gender of the patient and gender of the healer [min,max]

Age and gender of new patients	*Gender of the traditional healer*		
	Male (n=39)	*Female (n=64)*	*Total (n=103)*
Children	0.8 [0,5]	1.4 [0,11]	1.2 [0,11]
Adults	3.5 [0,41]	3.6 [0,43]	3.6 [0,43]
Elderly	0.2 [0,6]	0.2 [0,3]	0.2 [0,6]
Male	1.8 [0,10]	1.4 [0,17]	1.6 [0,17]
Female	2.8 [0,35]	3.8 [0,40]	3.4 [0,40]
All	4.6 [0,42]	5.2 [0,57]	5.0 [0,57]

in the past 7 days were children, 71 percent were prime-aged adults and only 4 percent were elderly.

The most frequently reported conditions among all patients were gynecological problems, fevers and diarrhea (see Table 7, column 3).[6] There are differences in the share of patients suffering from different conditions by gender. Among females the most common complaints were gynecological (41 percent of all female consultations) and fevers (20 percent). Among males, the most common were fevers (23 percent of all male consultations), diarrhea (15 percent), respiratory conditions (10 percent) and STDs (9 percent). Children were most likely to consult for fevers and diarrhea, prime-aged adults for gynecological problems and fevers, and the elderly for cardiovascular,

Table 7. Distribution of patients in the past 7 days by complaint, gender and age (n=number of patients)

	Gender of patients			*Age of patients*		
Condition	*Male (n=163)*	*Female (n=353)*	*Both[a] (n=518)*	*Children (n=129)*	*Adults (n=366)*	*Elderly (n=21)*
Gynecological problems	0.0	41.4	28.2	0.0	39.3	9.5
Fevers	22.7	18.7	19.9	35.7	15.0	9.5
Diarrhea	14.7	5.9	8.7	20.9	4.6	4.8
STDs	9.2	4.2	5.8	0.0	8.2	0.0
Musculoskeletal problems	5.5	4.0	4.4	1.6	4.9	14.3
Respiratory conditions	9.8	1.1	3.9	2.3	3.6	19.0
Gastrointestinal problems	4.3	3.4	3.7	6.2	2.7	4.8
Cardiovascular problems	2.5	4.0	3.5	0.0	3.6	23.8
Skin problems	4.9	2.8	3.5	3.1	3.6	4.8
Mental illness	4.3	2.3	3.3	2.3	3.3	0.0
Asthma	3.7	2.0	2.5	1.6	2.7	4.8
Snakebites	4.3	0.6	1.7	1.6	1.9	0.0
Fractures	3.1	1.1	1.7	2.3	1.6	0.0
Communicable diseases	2.4	1.1	1.5	3.9	0.8	0.0
Abdominal cramps	0.0	2.0	1.4	1.6	1.4	0.0
Witchcraft	1.2	0.6	0.8	0.0	1.1	0.0
Intestinal parasites	1.2	0.6	0.8	3.1	0.0	0.0
AIDS	0.0	0.0	0.0	0.0	0.0	0.0
Others[b]	6.1	4.2	4.8	14.0	1.6	4.8
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

a. The age and gender of two patients was not reported, so the totals by gender and age add to 516 instead of 518.

b. Includes convulsions, spirits, hemorrhaging, eye problems, dengue fever, diabetes, anemia, headache and others

6. This pattern of illness among the patients of healers is quite different than among those in the sample of households interviewed. The major illnesses reported by 2459 individuals who were ill or injured in the past four weeks were: the common cold (31.7 percent), malaria (20.9 percent), parasites (5.0 percent) and other unspecified illnesses (32.4 percent). Among the 388 persons whose condition was diagnosed by a practitioner, the major cause of illness was: malaria (38.4 percent), other illness (28.1 percent), parasites (11.3 percent) and common cold (8.0 percent).

respiratory and musculoskeletal problems. None of the healers reported any new AIDS patients in the past 7 days, although many of the conditions in Table 7 are common symptoms of full-blown AIDS and its opportunistic infections.

5. Facilities and equipment

Eighty-four percent of the healers said they treat patients within their (the healers') homes, 12 percent said they treat patients at their own or their patients' homes, 3 percent treated patients in the patients' homes, and 2 percent practiced out of an office. About one fifth of the healers admit in-patients, although only one healer said she/he had beds for patients (five beds). The night prior to the day of interview, two of the healers had in-patients. Roughly one-third (36 percent) of the 22 healers who admit in-patients said they have a ward for in-patients, while the remaining two-thirds offer accommodation with their own households. Almost half of the healers (48 percent) had assistants. The mean number of assistants for the entire sample of healers was about one, but the number ranged from 0 to 6.

Sanitation and proper excreta disposal are important to prevent disease transmission in communities. Eighty five-percent of the healers said they have pit latrines (see Table 8). Adequate sanitation requires the availability of water. The main source of water for the healers was: springs (31 percent); wells (19 percent); river (19 percent); lakes and ponds (17 percent); and tap or community standpipe (16 percent). The main source of water was located, on average, 157 meters from their residence; about a third of the healers said that the water source was so close that it didn't involve travelling any distance to fetch it.

Table 8. Percent of healers in possession of various facilities and equipment

	Gender of healer		
Item of equipment	*Male (n=39)*	*Female (n= 64)*	*Both (n=103)*
Equipment			
Razor blade	53.9	65.6	61.2
Rubber gloves	0.0*	9.4*	5.9*
Scissors	5.1	6.3	5.8
Reusable syringes	0.0	1.6	1.0
Drugs			
Aspirin	2.6	3.1	2.9
Chloroquine	2.6	1.6	1.9
Facilities and Transport			
Pit latrine	82.1	87.5	85.4
Vehicle or bicycle	7.7	1.6	3.9
Running water	5.1	1.6	2.9

* The difference in the percent of males and females owning gloves is statistically significant at p=.05.

Sixty-one percent of the healers had razor blades. However, they had very little else in the way of equipment or modern drugs. Only 6 percent of healers had rubber gloves, which are important in preventing transmission of HIV between patient and healer. None had disposable syringes, examination beds, stethoscopes, antibiotics, disinfectant or condoms. Very few had reusable syringes (a potential source of HIV infection if not properly sterilized), and even commonly requested drugs, such as aspirin and chloroquine were not at hand. It would seem that the healers rely almost exclusively on their own herbal remedies and by and large are not engaged in dispensing modern sector drugs or promoting the use of condoms.

6. Prescriptions and referrals

Ninety percent of the traditional practitioners cited health problems for which they refer patients to modern hospitals and 31 percent reported referring patients to other healers. AIDS/HIV and malaria are the two conditions for which referrals are most common to the modern health sector, while witchcraft and fractures are among the most common reasons for referrals to other healers (see Table 9). The most important reasons for referrals include: no improvement in the patient's condition (61 percent); treatment is beyond the healer's skill (60 percent); condition is outside the healer's specialty (52 percent); and inadequate facilities to care for the patient (25 percent).

Eighty-six percent of the practitioners reported having treated patients who had already obtained treatment in hospitals. The main reasons the patients were thought to have turned to traditional medicine included: patient not cured by modern medicine (91 percent of those who had received such patients); the reputation of the healer's own treatments (38 percent); lack of a modern treatment (32 percent); and the nonavailability of drugs (20 percent). Only 8 percent of the healers thought that the reason that patients switched to traditional care was because of the high price of modern treatment. Virtually all of the 103 healers (98 percent) prescribe their own treatments and dispense the treatments themselves.

Table 9. The five most frequent conditions for referrals to other providers

Modern hospitals (n=93)		*Other traditional healers (n=32)*	
Condition	*Percent*	*Condition*	*Percent*
AIDS/HIV	41.9	Witchcraft	25.0
Malaria	40.9	Fracture	21.9
Malnutrition	17.2	HIV/AIDS	12.5
Diarrhea	16.1	Asthma	12.5
Other unspecified illnesses	45.2	Other unspecified illnesses	50.0

7. Modes of payment and healer incomes

All healers are private providers of health care. They earn money from their practice, although it is not the only source of income. The mean value of the healers' income from their practice in the 7 days before the interview, in cash and in kind, was 1252 shillings ($3.09 at 1993 exchange rates, see Table 10). This amount to about 60 percent of the mid-point weekly salary of a government medical assistant and 77 percent of that of a nurse assistant (GOT 1992/93). However, one third of the healers reported earning no income in the past 7 days from their practices, although 28 percent of that group (9 healers) did report seeing patients. At the other extreme, 22 percent of healers reported receiving 1000 shillings or more. Female healers were more likely to be paid and thus had higher earnings, but this difference in the percent compensated is not statistically significant. The most common forms of payment accepted by healers are cash (accepted by 95 percent), crops (72 percent), animals (17 percent) and labor (9 percent). Among the 49 healers who offered childbirth, mean income from deliveries in the past one month was 585 Tsh; 41 percent did not perform any deliveries in the past month.

Table 11 reports the average, minimum and maximum fees charged for treatment of various conditions, among healers who claimed to treat the condition. Conditions are listed in order from the most to least expensive. Few practitioners treat AIDS, but the average cost is by far and away the highest — 6740 shillings ($16.64), with the maximum price reported at 25,000 shillings ($61.73). Spirits and witchcraft are the next most expensive conditions to treat, at 2320 and 1680 shillings, respectively ($5.73 and $4.15). Mental illness is the fourth most expensive condition, at 1578 shillings ($3.90). The remaining conditions are all treated for less than 800 shillings. These fees are considerably more expensive than publicly-provided medical consultations, provided free of charge. However, expenditures on modern drugs could easily exceed these amounts. More than three-quarters of the healers reported that the payment includes the herbs necessary for treatment.

The range of fees in Table 11 reveals that for most conditions, at least one healer claimed not to charge anything for treatment — witchcraft, spirits and snakebites being notable exceptions. Only

Table 10. Distribution of healers according to their mean income from medical practice, past seven days

	Gender of the healer		
Income level	*Male (n=39)*	*Female (n=64)*	*Both (n=103)*
Nothing	43.6	25.0	32.0
1-99 Tshs	0.0	4.7	2.9
100-499 Tshs	15.4	31.3	25.2
500-999 Tshs	15.4	18.8	17.5
1000 Tshs or more	25.6	20.3	22.3
TOTAL	100.0	100.0	100.0
Mean income from medical practice, last seven days (Tsh)	1061	1369	1252

Note: The 1993 average market exchange rate was 405 Tsh/$1 US.

Table 11. Fees charged for treatment by traditional healers, according to the condition treated (Among healers treating a condition)

Condition	*Number of healers treating condition*	*Mean fee (including zeroes)*	*Fee range [min, max]*
AIDS	5	6740	[0,25000]
Spirits	5	2320	[100,7000]
Witchcraft	5	1680	[100,5000]
Mental illness	37	1578	[0,10000]
Cardiovascular problems	39	760	[0,5000]
Asthma	32	757	[0,5500]
Respiratory conditions	54	752	[0,10000]
Fractures	44	726	[0,3000]
Snakebite	6	667	[200,1500]
Gynecological problems	85	641	[0,10000]
Musculoskeletal problems	53	540	[0,3000]
STDs	62	522	[0,3000]
Childbirth	49	503	[0,1500]
Skin problems	61	429	[0,3000]
Gastrointestinal problems	50	404	[0,2000]
Diarrhea	80	360	[0,5000]
Convulsions/epilepsy	8	313	[0,1200]
Fevers	88	284	[0,2000]
Dengue fever	6	158	[0,300]

one healer reported offering delivery at no charge. Traditional healers often encounter patients who have no means to pay but are in need of their services. Healers were asked about the timing of payments and their payment exemption policies. Over half (57 percent) said that patient must pay at the time of the initial consultation. Two-thirds of the healers reported, however, that patients may not have to pay if they are poor; only 4 percent reported that patients absolutely were expected to pay even if they were poor. Some of the patients who are not able to pay may be allowed to settle their bills at a later date.

The healers were also asked whether the patients were required to pay if they in fact were not cured. More than half (58 percent) reported that patients never have to pay if they are not cured, while 23 percent reported that they must always pay, even if not cured. The remaining 19 percent reported that uncured patients usually or sometimes must pay. It would seem, therefore, that healers' pricing policies are somewhat flexible, depending on the specific condition, the ability to pay of the patient and whether or not the patient's condition is improved. Among the 36 healers who said they had been consulted by an AIDS patient, 61 percent do not require payment unless the patient is cured, while 22 percent require payment even if not cured.

8. Knowledge of transmission, prevention and treatment of AIDS

All of the healers had heard of AIDS. The healers were asked to list the most common symptoms of AIDS. The symptoms most often cited are listed in Table 12. "Other" symptoms not listed in the table include: change in hair color (10.7 percent); mental confusion and rapid weight gain (4.9 percent each); change in eye color and herpes zoster (1.9 percent each); and change of ribs, blood loss, amenorrhea, headache and palpitations (1 percent each). This suggests that many of the common symptoms of AIDS are known to some of the traditional healers. Healers who had been consulted by AIDS patients were more likely to identify AIDS symptoms.

The healers were also asked how HIV/AIDS is transmitted. Almost all of the healers recognized sexual intercourse as the major mode of transmission, but knowledge of other major modes — injections, razor blades, transfusions, pregnancy — was low (see Table 13). Further, there is still some misunderstanding concerning transmission through shared eating utensils, physical contact and insect bites. However, the healers' knowledge of the modes of HIV transmission was better than their knowledge of the modes of transmission of malaria, which was the most prevalent health problem in their communities. Only one-third of the healers (35 percent) correctly identified the mosquito as the major mode of transmission of malaria. Eighteen percent thought it was caused by the sun or hot weather, 16 percent said it was caused by a dirty environment, 6 percent from bad food, and 16 percent said they didn't know.[7]

Thirty-five percent or the healers said that they had treated an AIDS patient. Most of the healers (83 percent) said that they used their skills to do the diagnosis of AIDS, while 17 percent said that the patients told them. Only 2 of the 36 healers who said they have ever treated an AIDS patient claimed to have cured the patient, while five healers stated that they thought AIDS was curable. For treatment of AIDS patients, 58 percent of the 36 healers recommended modern medicine, 28 percent

Table 12. Percent of healers spontaneously mentioning symptoms of AIDS

Symptom of AIDS	*All healers (n=103)*	*Consulted by AIDS patient (n=36)*	*Not consulted by AIDS patient (n=67)*
Weight loss	84.5	83.3	85.1
Diarrhea	68.0	86.1*	58.2*
Frequent fevers	60.2	80.6*	49.3*
Itchy skin rash	52.4	69.4*	43.3*
Oral thrush and ulcers	36.9	50.0*	29.9*
Cough of long duration	28.2	36.1	23.9
Boils	14.6	19.4	11.9
Other symptoms	44.7	61.1*	35.8*

*. Differences between the percent mentioning a symptom is statistically significant at $p \leq .05$.

7. The remaining 11 percent cited miscellaneous reasons: anemia; drinking; malaria symptoms; sex; God; hard work; and physical contact.

Table 13. Percent of healers spontaneously reporting various modes of HIV/AIDS transmission

Mode of transmission	*Total (n=103)*	*Those consulted by AIDS patients (n=36)*	*Those not consulted by AIDS patients (n=67)*
Sexual intercourse with infected person	97.1	100.0	95.5
Injections [b]	37.9	52.8	29.9
Sharing razor blades	25.2	25.0	25.4
Blood transfusion [a]	23.3	44.4	11.9
Scarification	15.5	11.1	17.9
Sharing eating utensils	11.7	16.7	9.0
Mother to child (pregnancy) [b]	6.8	13.9	3.0
Touching a patient	4.9	8.3	3.0
Insect bites	1.9	2.8	1.5
God wishes	1.9	5.6	0.0
Breastfeeding	1.0	0.0	1.5
Other	5.8	5.6	6.0

a. Differences between the percent mentioning a symptom is statistically significant at $p \leq .01$.
b. Difference is statistically significant at $p \leq .05$.

recommended herbal medicine, 8 percent advocated animal products and 6 percent cited other, non-specific treatments.

In theory, some of the practices of traditional healers could facilitate the transmission of HIV virus between patients and between patients and the healer. It is thus important to know what, if any, precautions the healers are taking to avoid contamination. Among the 36 healers who said that they have ever treated an AIDS patient, 72 percent said that they practice some type of precaution (see Table 14). It is difficult to know how effectively healers are preventing HIV infection in their practices without knowing more about the nature of their interactions with patients during treatment. Among the 11 healers who believed they had delivered babies to mothers with AIDS, only 8 took special precautions to avoid infection. Three-quarters (6) wash after the delivery and only half (4) use rubber gloves.

Since no cure for AIDS is likely for some time, the main way to lower HIV prevalence is through prevention. Because of their local reputations and proximity to communities, traditional healers are potentially good sources of information to the public on prevention of HIV infection (Chirwa and Sivile 1989). Almost all of the healers (98 percent) recommended avoiding promiscuity to prevent HIV. However, few mentioned sterilizing syringes properly (24 percent), testing of blood for transfusion (17 percent) or use of the condom (12 percent). Almost half of healers (47 percent), said that they sterilize the equipment they use in their practice. Most sterilize their equipment by boiling it (71 percent); the remainder used disinfectants or other methods. However, as was seen above, none of the healers actually had disinfectants. About half of those performing scarification reported that they throw away scarification equipment after each use. Other procedures such as

Table 14. Percent of healers spontaneously citing ways they protect against HIV infection among those who have been consulted by AIDS patients (n= 36)

Protective measure	*Percent*
Wash immediately after treating a patient	38.9
Avoid contact/separate from others	30.6
Discard equipment	25.0
Wear gloves	13.9
Boil equipment	11.1
Herbal medicine	2.8
No precautions	27.8

circumcision, ear-piercing and tattooing, are not very common among these healers. The few who practiced them mostly threw the equipment away after use.

9. Summary and conclusions

There has been widespread interest in mobilizing the skills and expertise of traditional medical practitioners to expand the coverage of primary health care and to combat the spread of AIDS. However, very little is known about the current levels of knowledge and the specific practices of traditional healers. This study has sought to expand the information on healers in a region of Tanzania particularly hard-hit by the AIDS epidemic. Kagera region is the site of a full-blown epidemic of HIV/AIDS that was first detected in 1983 but surely began years earlier. This study analyzed the results of a survey of a stratified random sample of 103 traditional healers in Kagera, conducted in 1993. Among the key findings:

- Two-thirds of the sample of healers was female and most were elderly (60 years or older). Most claimed herbalist as their main specialty, although most of the female herbalists also delivered babies as a second specialty. Traditional medicine was not the sole source of income for these healers; all were also engaged in agriculture and several in other full-time jobs.

- The healers had very little in the way of modern equipment and generally did not seem to be engaged in dispensing modern drugs. They relied mainly on their own herbal remedies and skills.

- Billing and pricing procedures seemed to be flexible, depending on the condition, the patient's ability to pay, the mode of payment, and whether or not the condition is cured. However, healers often did charge for treatments at a rate that is even higher than the modern sector. The study was not able to compare the efficacy of traditional and modern treatments for the same condition.

- Although many had been consulted by AIDS patients, most of the healers were *not* involved in treating AIDS per se, they recognized that it cannot be cured, and often referred suspected AIDS patients to modern care for treatment. However, the healers might have been treating many HIV-positive patients for opportunistic infections (such as diarrhea and mental illness) without recognizing them as AIDS patients.

- Almost all of the healers were aware that AIDS is spread through sexual intercourse. However, this also true in the general population, thanks to public information campaigns. The healers were not familiar with other modes of transmission and were not taking adequate precautions to prevent their own or their patients' infection. Very few of the healers had rubber gloves, for example, even though many of them delivered babies. Their knowledge of the transmission of malaria, the major cause of morbidity in their communities, was weak.

- The healers had no condoms and, even with the knowledge that AIDS is spread through sexual contact, were not likely to recommend using condoms to their patients. Yet, a fairly large share of the healers offered treatment for gynecological problems (83 percent) and sexually transmitted diseases (60 percent). This would provide them access to a segment of the population that is often targeted for condom promotion.

Healers' advanced age, experience, acceptability and availability gives them a status of authority and trust. However, the results of this study suggest that efforts to involve traditional healers in AIDS prevention efforts, including condom distribution (if in fact they are interested), would require a large effort in training and in provision of other essential equipment. Even if healers are not actively mobilized as educators, the results of this study clearly show that they are in need of additional training and equipment to prevent transmission of HIV to themselves and their clients.

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