FACTORS AFFECTING LEPROSY CASE DETECTION IN THE NATIONAL TUBERCULOSIS/

LEPROSY CONTROL PROGRAMME OF TANZANIA: A RESEARCH REPORT.

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OVERVIEW

The findings of the first study of a two-phase research project are reported. The study sought to identify factors concerning the general population and the health services organization which impede leprosy case detection within Tanzania's leprosy control programme.

The study was done in two regions of Mainland Tanzania of supposedly equally high prevalence of leprosy but different leprosy case detection rates. The analytical framework provided for determinig differences among the components of the leprosy control system in the two regions which might provide the basis for explaining the high detection yield in one region and low detection yield in the other region.

The regions covered were Morogoro, a high case detection region, and Mwanza, a low case detection region. Both regions along with five other regions were believed to have leprosy prevalence rates of 10 per 1000 and above.

Specific investigations carried out consisted of interviews with a sample 1200 members of the general adult population, interviews with 194 leprosy patients, interviews with 161 health workers, mainly Rural Dispensary Attendants, Rural Medical Aides and Medical Assistants, srutiny of a sample of 600 leprosy registration/treatment cards, and observations of the outpatient health situation in 115 health units.

The analysis of findings was undertaken with a view to testing eight specific substantive hypotheses concerning the difference between the high and low detection regions. Most of the hypotheses were not confirmed. It is postulated that this major finding is indicative of the possibility that the two regions do not have equally high

leprosy prevalence rates and that the difference in the detection rates
reflect differences in the basic epidemiology of the disease in the two
regions rather that deficiencies in the relevant components of the leprosy
control system in the so-called low case detection rate region.

Nevertheless the findings indicate that there are specific areas within
the leprosy control system which merit attention, not necessarily in order
to improve the case detection yield as such but rather in order to ensure
early diagnosis and detection of leprosy. The finding that a sizable
proportion of leprosy patients had disabilities attest to this problem.

THE BACKGROUND AND RESEARCH PROBLEM

This study arose out of the concern voiced by the Tanzania Tuberculosis/ Leprosy Programme in the 1981 report about the declining detection rates. It was reported that for the years 1979, 1980 and 1981 total leprosy case detection rates were 34.2, 30.0 and 21.2 per 100,000 respectively while the total new registrations for these years were 5661, 5423, and 3984 (NTLP 1981).

A Ministry of Health circular (MOH n.d.), addressed to Regional and District Medical Officers and Administrators of Voluntary Agency hospitals maintained that "There is no evidence that this decrease is due to some spectacular success in controlling these diseases since the formation of National Tuberculosis and Leprosy Programme. In the presence of indicators of poor performance in other sectors in the country as a whole, it is rational to attribute this decline to poor case finding". It enjoined these officials to use their influence to motivate health workers to increase case finding.

According to the circular what was expected from health workers was a high index of suspicion of leprosy and tuberculosis followed by action to establish the diagnosis.

The goal of this study was therefore to contribute towards the objective of improving case finding by determining the factors which impede case detection and making recommendations as to how such factors might be modified.

The study proceeded from the premise that since the Tanzania Leprosy Control Programme relies on passive case finding no matter how highly motivated the health workers may be they can only detect cases among the people who consult them in the health units. The search for factors that contribute towards poor case detection yield has to be extended to cover the general population of potential health care users and the way health care delivery operates.

Specifically the study sought to identify factors concerning the general population and the health services organization which impede leprosy case detection and to determine how these can be modified in order to improve case detection.

The search for factors within the general population and within the health care delivery system was informed by a review of the appropriate literature. The salient issues are highlighted below.

In Tanzania, and other similar countries use of modern health services is still a highly selective behaviour. It is highly probable that a sizable proportion of the population do not utilise modern health services. Leprosy cases among such people cannot be detected at health units by relying on the passive case finding approach.

It was therefore imperative for the purpose of this study to determine the extent to which people in the study area used health services.

Passive case finding relies heavily on self report and lay referral of supsected cases. Detection of leprosy through this approach is therefore contingent upon members of the general population being knowledgeable about the early signs and symptoms of leprosy, and having confindence in the health care system to deal with leprosy.

Beliefs about leprosy, in particular the degree to which leprosy is stigmatised may lead people who have the disease to hide it or at least to delay seeking care unti they can no longer hide. Indeed that it is the stigma attached to leprosy which impedes active community involvement in leprosy control is a common belief in leprosy control circles.

With regard to the health care delivery system, even when people come to health units those with leprosy may not be detected if the prevailing conditions do not allow it.

According to one instruction manual on leprosy (Wheate 1971) a private room with adequate lighting is required for the examination for leprosy. The patient must be examined preferably with no clothes on except pants

or briefs. It was deemed, for this study, that very few peripheral health care units in Tanzania meet this condition. Furthermore in some situations the high case load clinician have may not allow them to spend enough time with patients. This means that they are less likely to detect the early cases of leprosy except where the patient actually complains that he or she had leprosy.

It is recognised that the conditions with which leprosy can be confused are many and varied (Browne 1970). Wheate (1983) maintains that unless the general medical practitioners and health auxiliaries have much knowledge and experience of leprosy they might not recognise the early skin lesions in the course of routine medical examination. The ability of all consulting health workers within the Tanzania Leprosy Control Programme to detect and diagnose leprosy could not be taken for granted.

THE RESEARCH DESIGN

It was decided to carry out the study in two regions which have equally high prevalence of leprosy but different case detection rates. The regions selected were Mwanza and Morogoro. Both regions are believed to have a leprosy prevalence rate which is above 10 per 1000. Using the 1978 Census figures as the base and new leprosy patient registration for the years 1981 and 1982 Morogoro region had a detection rate of 47.1 per 100,000 in 1981, and this declined to 41.6 per 100,000 in 1982. Mwanza had a detection rate of 11.6 per 100,000 in 1981 but this rose to 15.1 in 1982.

Consultation with the RTLCs of the two regions led to the selection in the case of Mwanza, of Geita and Sengerema as district with the lowest and highest detection rates, and for Morogoro the district were Kilombero and Morogoro A respectively.

The focus of the study was to investigate different aspects of the general population and the health care delivery system in the two regions with a view to contrasting between the low and high detection areas.

The following population categories were singled out for investigation:
- The general population, comprising the subjects of the adult population and leprosy patients.
- Health workers, ie the medical auxilaries who serve as clinician in dispensaries, and rural health centres.
- Rural health facilities, namely dispensaries and health centre

RESEARCH METHODOLOGY

A multistage sampling strategy was used to select the sample of the general adult population. For the two low detection districts, the first stage involved the selection of two rural wards. The second stage involved the selection of one village from each ward. During the third stage two Balozi were selected from each village, resulting in eight Balozi. The fourth and final stage involved the enumeration and interview of all adult members of the households in thec cells of the selected Balozi. This yielded a sample size of 400 respondents for each district. The selection process was modified for the two high detection districts such that only one Balozi was selected during the third stage, resulting in a sample of 200 respondents per district.

The selection of leprosy patients was adhoc. Only those leprosy patients found at clinics during our visit or at home during the general population survey were covered. The original design of taking a random sample from registration cards and tracing the selected patients was not feasible. As for the selection of health units, attempts were made to cover all the health units in each of the selected districts.

Similar a review was made of all the registration cards available at the district headquarters and found at individual health units. The original plan of taking a sample was not feasible because the cards were not available in one place.

The study was basically a sample survey with the interview as the main research method. Interview schedules were constructed for the general adult population, leprosy patients and health workers. An observation schedule was constructed for health units and a check list was used for extracting information from patients registration cards.

Research Assistants who consisted of Medical/Dental students and Sociology students of the University of Dar es Salaam were trained and employed for the exercise of data collection.

The data were processed and analysed with the assistance of the Computer Unit of the Department of Epidemiology and Biostatistics, Muhimbili Medical Centre.

I. DESCRIPTION OF AND FINDINGS CONCERNING THE SAMPLE OF THE GENERAL POPULATION

SAMPLE POPULATION

A total number of 1200 respondents were interviewed. 51 percent were women and 49 percent were men.

Their ages ranged from 15 to over 80. 38 percent were in the 15 - 29 age groups, 34 percent were in the 30 - 49 age group, and 28 percent were 50 years or older.

45 percent of the respondents were heads of households. 29 percent were the spouses of heads of household and 19 were sons or daughters of heads of household. The remaining 8 percent were related to heads or household in other ways.

Most of the respondents (i.e. 91 percent) were cultivators. All of them except 26 were traditional peasant cultivators. Only 19 percent of respondents were from cattle rearing households.

Members of the sample population lived in typical traditional rural houses. Thus 95 percent lived in houses whose walls were either of mud-bricks (25%) or polls and mud (59%); they were thatched with grass (68%) and had mud floor (90%).

Although the majority of the respondents (55%) had some primary school education, a sizable proportion of 33 percent were illiterate, and the other 9 percent had only been through adult education classes. Only three percent had secondary or post secondary school education.

KNOWLEDGE, ATTITUDES, AND BELIEFS CONCERNING LEPROSY OF THE SAMPLE POPULATION

The instrument which was used sought to determine knowledge, attitudes, beliefs and other attributes of the general adult population in relation to leprosy. The first thing we did was to determine the kind of image of sterio-type of leprosy people have, and what things they associate with leprosy. We selected ten common characteristics and asked the respondents if each of these characteristics was associated with leprosy. The characteristics as well as the responses obtained are summarised in Table I.1.

TABLE I.1   RESPONDENTS WHO INDICATED THAT THE TEN CONDITIONS WERE

ASSOCIATED WITH LEPROSY.

CONDITION	NUMBER OF RESPONDENTS	PERCENT OF SAMPLE
HYPOPIGMENTED LESIONS	727	60.6
ULCERATING EXTREMITIES	1028	85.7
SADDLE BACK NOSE	793	66.1
HANGING EAR LOBES	966	80.5
MADAROSIS	670	55.8
CLAW HAND	1134	94.5
NUMBNESS OF HANDS/FEET	797	66.4
NODULES ON FACE	1006	83.8
RED EYES	695	57.9
STUFFY RUNNING NOSE	452	37.7

It is noteworthy that only the sequelae of leprosy seem to be widely recognised, namely claw hand, ulcerating extremities, nodules on the face and hanging ear-lobes. These were recognised by over 75% of the respondents.

The early signs and symptoms of leprosy, namely numbness of hands/feet, and hypopigmented lesions were not so widely recognised. Also not generally recognised are: red eyes and stuff running nose.

Since all of these are common features of leprosy it was expected that a knowledgeable person would recognise them as symptoms or characteristics of leprosy, and would attain a maximum Image Score of 10. The distribution of Image Scores of respondents is shown in Table I.2. 72.9 percent had a score of 6 and above, the Mean Score for all respondents was 7.05.

TABLE I.2   IMAGE SCORES OF RESPONDENTS

IMAGE SCORE	NUMBER OF RESPONDENTS ATTAINING THE SCORE	PERCENT OF SAMPLE
1	36	3.0
2	34	2.8
3	58	4.8
4	88	7.3
5	110	9.2
6	120	10.0
7	148	12.3
8	183	15.3
9	169	14.1
10	154	21.2

MEAN SCORE = 7.05

Next on the research instrument was a series of statements aimed at evoking responses which manifest beliefs concerning leprosy, leprosy patients and treatment/management of leprosy.

The belief statements and the responses evoked are presented in Table I.3.

TABLE I.3   RESPONDENTS WHO ENDORSED THE BELIEF STATEMENTS

BELIEF STATEMENTS	NUMBER OF RESPONDENTS	PERCENT OF SAMPLE
1 LEPROSY PATIENTS SHOULD NOT BE TREATED IN GENERAL PURPOSE FACILITIES.	979	81.6
2 LEPROSY PATIENTS SHOULD NOT MIX WITH OTHER PEOPLE IN THE COMMUNITY.	1057	88.1
3 LEPROSY PATIENTS ARE MALICIOUS, THEY TRY TO INFECT OTHER PEOPLE	909	75.8
4 LEPROSY PATIENTS ARE DESPISED	760	63.3
5 LEPROSY IS INCURABLE	489	40.8
6 LEPROSY ALWAYS LEADS TO DEFORMITY	1154	96.2
7 LEPROSY RUNS IN FAMILIES	848	70.7
8 IT IS ACCEPTABLE FOR LEPROSY PATIENTS TO GO BEGGING.	840	70.0
9 THE WORST THING ABOUT LEPROSY IS THAT IT MAKES ONE AN OUTCAST	1006	83.8
10. LEPROSY IS THE WORST POSSIBLE DISEASE	1127	93.9

It is instructive to note that some belief items are more widely than others, thus whil over 75 percent of the sample population endorsed the beliefs items Nos. 1, 2, 3, 6, 9 and 10, only 40.8 percent endorsed belief items No. 5.

It is noteworthy also that while the majority of respondents (59.2%) did not share the belief that leprosy was incurable (Belief Statement 5), almost

all respondents (96.2%) endorsed the belief that leprosy always caused

deformities - (Belief Statement 6). Table I.4 shows the distribution

of Belief Scores.

TABLE I.4   BELIEF SCORES OF RESPONDENTS

BELIEF SCORE	NUMBER OF RESPONDENTS ATTAINING THE SCORE	PERCENT OF SAMPLE
1	7	0.6
2	12	1.0
3	27	2.3
4	39	3.3
5	70	5.8
6	164	13.7
7	210	17.5
8	222	18.5
9	226	18.8
10	223	18.6

MEAN SCORE   = 7.6

One the whole it can be said that erroneous beliefs abound among the sample

population. Thus only 13 percent of the respondents had a score of 5 or

less. Most of the respondents had higher scores, and the Mean Score for

the sample was 7.6.

Next on the interview schedule was a series of 16 open-rended questions
which sought to find out what respondents knew about different aspects
of leprosy and tap their miconceptions as well as their fears and
concerns about leprosy.

The results show that while 57.8 percent of the respondents could not
single out particular types of people who can get leprosy, another
26.6 percent mentioned different types of people. The types of people
mentioned include people from families with a history of leprosy, people
who eat a particular type of fish, and people who live in unsanitary
conditions.

52.7 percent of the respondents said they did not know what causes leprosy,
while not indentifying the cause of the disease, 19.1 percent of respondents
said leprosy is transmitted from person to person and another 11.8 percent
reported that leprosy runs in families.

Though patches and nodules were generally recognised as characteristics
which distinguished the two forms of leprosy most respondents (96.7%)
could not tell how leprosy could be differentiated from other types
of skin diseases.

While only 18.3 percent of the respondents indicated that it was acceptable for leprosy patients to be treated at local health units, 45.7 percent said that leprosy patients should be treated in leprosaria, and another 28.5 percent said such patients should be treated in hospitals.

Most respondents expressed the view that the management of leprosy entailed admission to leprosaria (51.9%), special camps (18.6%) or hospitals (17.2%). Only 12.2 percent said that leprosy cases can be managed on an outpatient basis.

Three major recommendations on how leprosy can be be dealt with more effectively are decernible from the suggestions made by the sample of the general adult population. The first one, which is apparent from the suggestions of 32.2 percent of the respondents, is that the current leprosy control approach should be strengthened, largely by making more medicine available and by training more health workers in leprosy control. The second one, made by 20.2 percent of the sample called for new approaches to leprosy control. These involved introducing vaccines and keeping leprosy patients in hospitals and leprosaria where they can be treated with injections. The third one, made by 38 percent of the respondents called for action outside the modern health care system. This comprises of rounding up and banishing or killing off people with leprosy, not allowing people from families with a history of leprosy not to get married, and giving greater role to traditional healers. Another 115 or 9.6 percent had no suggestions to offer.

It was reported by 56.7 percent of the respondent that what people feared most about leprosy is the deformity which invariably accompanies the disease. 42.8 percent of the respondents reported that people who have leprosy or are suspected as having leprosy are informed of this by relatives or close friends. 19.9 percent reported that such people are not told at all, and another 37.3 percent said they did not know how such people learn about the nature of their affliction.

Relationships between people who have leprosy and other members of the community are problematice. While 49.7 percent reported that people with leprosy do not mix together with the general population, another 42.7 percent said such people interact with members of the general population like everybody else.

In an effort to gauge respondents' personal involvement with leprosy a number of questions were asked. These revealed that 50.8 percent knew of someone in the village who had leprosy, 22.6 percent suggested that there might be people in the village who dress up to hide leprosy, and 3.8 percent reported that a member of their household had leprosy.

The extent of utilisation of modern health care was indicated in two ways. Firstly respondents were asked whether any member of their household had gone for treatment or for other forms of health care to a modern health unit during the year. 77.3 percent answered in the affirmative. Secondly respondents were asked whehter they themselves had gone to a modern health unit for treatment or for other forms of health care during the year. 57.3 percent answered in the affirmative.

II. LEPROSY PATIENTS

THE SAMPLE POPULATION

A total of 194 leprosy patients were interviewed. 85.6 percent were interviewed at health units, and the other 14.4 percent were interviewed at home. 101 patients or 52.1 percent were seen in Mwanza and 93 patients or 47.9 percent came from Geita, 20.6 percent from Sengerema, 24.7 percent from Kilombero, and 22.7 percent from Morogoro A.

102 patients or 54.6 percent were men and 88 or 45.4 percent were women. The large majority of leprosy patients lived a reasonably normal social life. 57.2 percent were married, and only 12.9 percent lived alone. Indeed 74.7 percent reported that they were self reliant, and only 25.3 percent declared themselves as dependent on the support of other people, usually relatives.

AWARENESS OF CONDITION AND ACTION TAKEN

The focus of the interview with leprosy patients was on the circumstances surrounding their detection and registration.

A substantial proportion (43.3%) of patients became suspicious that they might be suffering from leprosy within the last five years. For the large majority (63.3%) it was within the last ten years.

Asked about the time period since noticing the signs and symptoms to becoming suspicious that these signs and symptoms could be indicative of leprosy, 32 percent of the patients said it was between one and two years, 24 patients or 12.4 percent said it was three to five years. Only 84 patients i.e. 43.3 percent said the interval was less than one year.

In response to the question as to who pointed out to the patients that the signs and symptoms they were experiencing were those of leprosy 86 patients or 44.3 percent said they themselves came to that conclusion and 49 percent said a relative pointed it out. Only 13 patients or 6.7 percent said they heard it for the first time from a health worker.

It is instructive that 146 or 75.3 percent reported of going to a health unit when they realised that they might be suffering from leprosy. Only 48 or close to 35 percent said they did other things first, including consulting with traditional healers.

As for the actual detection and registration of these patients, for most of them i.e. 96.9 percent this happened at health units. Only 6 patients were detected during case finding surveys.

Furthermore the large majority, i.e. 73.7 percent, reported that they did go to the health unit specifically to complain about what they already knew to be leprosy. Only 51 patients, or 26.3 percent said they had gone to the health unit with complints, other than leprosy.

THE IMPACT OF LEPROSY

Although 79 patients or 41 percent reported that they had not suffered any personal loss by virtue of having leprosy, the large majority indicated that

they had suffered in some ways. Some felt that they had become isolated.
Others got divorced or were unable to find someone to marry. Another form
of personal loss was in terms of physical suffering due to deformity and
discomfort. Some als complained of reduced income.

Overall physical suffering and deformity were regarded as much more serious
in ther impact than social isolation.

THE EXPECTED OUTCOME OF TREATMENT FOR LEPROSY

For the large majority of leprosy patients the disease is perceived as a life
time affliction. 86 patients or 44 percent said either they did not know what
getting cured of leprosy meant or that they did not expect to get cured. 57
patients or 19 percent hoped for a complete recovery, and two of these said
they were actually improving. The remaining 51 patients or 26 percent were
vague about what getting cured meant for them and were not sure of the expected
outcome of their medication. Indeed for five of these patients all they could
say was that the health personnel keep telling them they would be cured.

It is noteworthy that 51 patients or about a quarter of the sample population
had been on treatment for more than ten years.

Asked if there was anything about the treatment and care they were getting with
which they not too happy, most patients (77.8 percent) could not think of
anything. It is noteworthy that among the things mentioned by the few who
did are: the only pills were given and nothing stronger, that they were not
getting better, and that they were not happy with the way some health personnel
treated them.

III. HEALTH PERSONNEL INVOLVED IN LEPROSY CONTROL

A total number of 161 health workers were interviewed. 102 or 63.4 percent
were seen in Mwanza and 59 or 36.6 percent were seen in Morogoro.

These health workers were stationed in dispensaries (81.4%). 28 or 17.4 were
in health centres, and only two were in hospitals.

In terms of designation the health workers seen were clinicians, namely:
Rural ˙Dispensary Attendants (15.5%), Rural Medical Aides (57.1%), Medical
Assistants (9.9%), and one Assistant Medical Officer. The other 27 or 16.8
percent were nursing personnel who often carried out the clinical duties of
diagnosis and prescription when clinicians were away. The majority of the
health workers (80.7%) were aged between 21 and 40 years.

The large majority (58.4%) of the health personnel interviewed had been in
the health services for more than six years, and close to half of them had
been in their current position for more than six years. 135 of the health
workers or 83.9 percent had been stationed in the health units where we
found them for up to six years. Overall 78 or them or 48.4 percent had
worked in the district where we found them for more than six years.
Only 30 health workers or 18.6 were natives of the district where they
worked.

PARTICIPATION IN LEPROSY WORK

Most of the health workers interviewed (92.5%) considered leprosy control as
part of their work. Indeed 75.2 percent reported that they had detected at
least one leprosy case while working at the health unit where they were
stationed at the time of the interview.

124 health workers or 77 percent reported that their health units stocked
drugs for leprpsy.

COMPETENCE IN LEPROSY

Most of the health workers (78.3%) reported that their training included
leprosy, but only 78 or 48.4 percent said they had attended a seminar on
leprosy control since graduating.

In response to the question about what they would do if they suspected that a patient they were seeing might have leprosy the majority of health workers (54.7%) said they would either refer the patient to the hospital or ask him to come back when the DTLC visits. Only 34 health workers (21.1%) said they would take history and examine the patient including testing for sensation of patches.

Another question sought to determine how the health owkrers would ensure that a suspected case of leprosy returns after some time for repeat examination. 86 health workers or 53.4 percent said that they would explain the natural history of leprosy to the perons, the need for thorough examination including repeat examination for correct diagnosis and the form of treatment available in order to reassure him and to motivate him to come back later, and that they would then take down the particulars of the person. 71 or 44 percent said they would either simply tell the person when to come back and hope that he would do so. Four said they did not know how they could ensure that the person returns for re-examination. Both Mwanza and Morogoro are high prevalence areas and it was deemed necessary that health workers realise this. We asked the health workers to tell us whether they thought leprosy was very prevalent, fairly prevalent or not at all prevalent in their districts. 27.3 percent said leprosy was very prevalent, and 62.7 percent said it was fairly prevalent and the remaining 10 percent said they had no idea. Nevertheless most health workers (89.4%) reported subsequently that they expected to see leprosy cases among the patients they see during normal OPD clinics.

KNOWLEDGE ABOUT LEPROSY

In order to asses the level of knowledge about leprosy and how cases can be detected a series of 10 True/False questions were asked. The results are summarised in Table III.1. On the whole the level of knowledge was found to be high.

TABLE III.1   RESPONSE PATTERNS OF HEALTH WORKERS TO "KNOWLEDGE" QUESTIONS.

	% INDICATING TRUE	% INDICATING FALSE
1. A **Leprosy** patient **may present with both painful nerves and loss of sensation.**	95.0	4.3
2. "Pin-**prick**" is the best method for testing for lack of sensation on lesions.	62.7	36.0
3. Cotton woll test" is less discriminating than the "pin-prick test".	43.5	54.0
4. Prolonged and intimate contact is not necessary for contracting leprosy.	54.0	44.7
5. The microbacterial of leprosy are transmitted through ulcers of patients.	31.7	66.5
6. The mode of transmission of leprosy is not known exactly.	46.0	52.8
7. Adequate drug treatment reduces the infectiveness of highly bacilliferous patients within a few weeks.	S7.6	11.2
8. The only method available for **leprosy** control is treatment of all known leprosy cases.	76.4	23.6
9. The only method available for preventing leprosy is BCG vaccination.	21.7	77.6
10. Isolation of leprosy patients in hospital or leprosaraum protects their household members from getting infected.	49.7	50.3

n = 161

ATTITUDES AND BELIEFS CONCERNING LEPROSY

A number of characteristics were believed to be associated with leprosy. These included coming from a family with a history of leprosy (12%), being in close contact with leprosy patients (26%), and being old (25%).

75.8 percent of health workers expressed **the view** that treating leprosy patients at OPD clinics with the rest of the patients did not constitute a danger of transmitting the disease to other people.

72.7 percent of health workers said they did not believe that health workers who work with leprosy patients stand the risk of getting infected with leprosy. The other 27.3 percent were either not so sure or believed that such health workers were at some risk.

In response to a vignette about the professional adivce they would give to a friend who wishes to marry a girl who has no leprosy but comes from a family with a history of leprosy, 80.7 percent of the health workers said they would adivse the friend to go ahead.

The majority of health workers (63.4%) did not share the belief that leprosy patients malicious and that they try to pass the disease on to others. They did not think that leprosy patients were generally ungrateful even though 55.3 percent endorsed the view that leprosy patients tend to associate any malaise to leprosy demand injections to relieve them.

Some 50.3 percent of health workers agreed with the view that leprosy can never really be cured, but that it is only cooled down and may surface if the patient does not observe the necessary regulations.

Many health workers had no experience with the MDT regimen and could not say whether with or without the MDT treatment for leprosy could continue to be a life long undertaking for the patient. Nevertheless 84.5 percent said they considered the available drugs to be effective for treating leprosy.

Asked about what the health workers feared most about leprosy, only 37.3 percent said they had nothing to fear about leprosy. The rest mentioned a number of things, particularly deformities (44.1%).

INDETIFICATION OF LEPROSY CASES

The final section of the exercise comprised 10 colour phorographs of different kinds of skin conditions including leprosy among black skin people. Health workers were presented with each photograph and asked if the condition depicted was leprosy or not. Most of the health workers were able to identify leprosy (Table III.2).

TABLE III.2   PROPORTION OF HEALTH   WORKERS WHO IDENTIFIED CORRECTLY

THE DISEASE CONDITION DEPICTED IN EACH PHOTOGRAPH.

	DISEASE CONDITION	% CORRECT IDENTIFICATION
1.	LEPROSY: T	46.6
2.	VITILIGO	72.0
3.	LEPROSY: BT	72.0
4.	LEPROSY: T	72.0
5.	MYCOSIS	37.9
6.	LEPROSY: T	83.2
7.	TINEA CORPORIS	61.5
8.	LEPROSY: BL	89.4
9.	LEUKAEMIA	32.3
10.	LEPROSY: BL	89.4

n = 161

IV   PROFILE OF LEPROSY PATIENTS ON REGISTER

DEMOGRAPHIC CHARACTERISTICS

A total of 600 leprosy patient registration cards were reviewed. 352 or

58.7 percent were for Mwanza region and the other 248 or 41.3 percent were

for Morogoro region.

55.5 percent of the cards reviewed were of men and 40.0 percent were of

women. The gender of the patient was not indicated on 27 (4.5%) cards.

The majority of patients (62.7%) were between 21 and 50 years old. 54

(9%) patients were under 21 and 127 (12.2%) were over 50 years old. Age

was not indicated on 43 (7.2%) cards.

The large majority of patients (71%) were natives of the districts where they

were registred. And overall most patients (84.5%) were natives of the regions

where they were registered. The place where the patient was born was not

indicated on 26 (4.3%) cards.

Most patients (80.8%) were registered in their districts originally and the other 19.2 percent were transferred from elsewhere.

MODE OF ENTRY INTO LEPROSY CONTROL

Although information was not available on 119 (19.8%) cards, the large majority of patients (73.8%) are shown as having been detected through self report. Cantact tracing is given as the mdde of detection for 11 patients, the survey method is creditted with 6 patients. The "other" method, by which is meant clinicians detecting unsuspecting leprosy cases among the patients they see was given as the mode of detection on 21 cards.

Most patients (84.5%) have been on the register between 1 and 10 years. Ten had been on the register for up to twenty years. Information on when the patient was first registered was not available on 41 cards.

MORBIDITY PATTERN

Tuberculoid and Boderline Tuberculoid more common among the registred patients (65%) than Lepromatous and Boderline Lepromatous (32.8%). The type of leprosy was not indicated on 13 cards.

DISABILITY PATTERN

The level of disability of hands, feet and eyes was generally low. 32 percent had some disability of the right hand while 30.3 percent had a disability of the left hand. Only 16 patients (2.7%) were shown as having Grade 3 disability of the left or right hand, or both.

Similarly 31.5 percent of the patients were shown as having a disability with the right foot, and another 30.7 percent had disability with the left foot. Serious disability of Grade 3 was recorded for only seven patients for the right foot and 5 patients for the left foot.

Disability of eyes was rare. Only 15.2 percent were shown to have a disability with the right eye, and 13.8 percent had a disability of the left eye. Grade 3 disability was recorded for 3 patients for either the left or right eye or both.

The typical leprosy patient on the register threfore is male, aged about 40 years, and is a native of the area. He was detected through self report, and has been on the register for an average of four years. He suffers from a Tuberculoid form of leprosy and has no disability.

V. OBSERVATIONS AT HEALTH UNITS

Observations were made in a total of 115 health units. 67 (58.3%) were in Mwanza and 48 (41.7%) were in Morogoro.

The health units in question were 97 dispensaries, 16 health centre and two hospitals.

95 of these health units were government owned, 13 were Voluntary Agency health units, and 7 were owned by Parastatal Organisations.

49 or 42.6 percent were the only health units within a radius of 5 kilometres.

AMENITIES AT HEALTH UNITS

Only 48 health units, or 41.7 percent had microscopes, and only 26 (22.6%) health units had running water.

Consultation rooms in 55 health units (47.8%) had wash basins but only the consultation rooms in of 51 health units (44.3%) had wash basins with water during the day of our visit.

Consultation rooms in 83 health units (72.2%) had examination beds. Consultation rooms in the other 32 health units (27.8%) had not such facility.

LEPROSY CONTROL ACTIVITIES AT HEALTH UNITS

81 (70.4%) health units had a register for leprosy patients. 60 or 52 percent had one to ten patients, 16 or 13.9 percent had 11 to 20 patients, and four health units had up to 31 patients.

86 (74.8%) health units had a special day during the week for leprosy clinic. Only one health unit allowed leprosy patients to come on any day.

Most health units (87.8%) had a Visitors Book. The book was perused to determine how many times over a period of one year to the date of our visit the DTLC, RTLC and DMO had visited the health units.

Among the 115 health units covered by the study the DTLCs had visited 67.8 percent of these and made an average of 2.5 visits per health unit, ranging from one to seven visits. The RTLCs had in turn visited only 20 percent of these health units. They had an average of 1.4 visits per health unit, ranging from one to three visits.

THE CLINICS

We observed OPD sessions at the health units visited, except in the few cases where we were late arriving at the health unit. Clinician in these health units saw between one and 141 patients. The large majority saw between 21 and 60 patients.

Specific sessions for health education during the day were observed in only 11 (9.6%) health units. None of these sessions covered leprosy among the topics discussed. And posters on aspects of leprosy were seen in only eight health units.

Queueing for consultation with clinicians is a normal feature of our health services. 40 people were waiting to see the clinician at the start of the day at one health unit visited. On the whole queue lengths were moderate, with 42 or 36.5 percent of health units with one to 10 people at the start, and 36 health units (31.3%) with 11 - 20 people.

Health units with 20 - 40 people were 19 (16.5%). We got to the remaining 18 health units o too late to observe this phenomenon.

Queues persisted, in some health units, for a good part of the day. Indeed in one health unit there were 36 people in the queue at the fourth hour of work! It should be said however that only 28 (24.3%) health units had queues at the fourth hour of work. 16 or them had one to 10 people waiting, six had 11 to 20 people witing, and the other six had more than 21 people still waiting.

Index cases were slected and their waiting time monitored. The first index cases waited for a mean of 46.7 minutes, ranging from one to 199 minutes. The fourth index cases waited for a mean of 40.3 minutes, ranging from one to 165 minutes. The tenth index cases waited for a mean of 35.6, ranging from one to 47 minutes.

Another series of index cases was selected for observation of consultation time, i.e. the time they spent in the consultation room with the clinician.

The first index cases in this group were in the consultation room for an average of 3.1 minutes, the range being one to 15 minutes, with most of the patients (85%) spending one to four minutes.

The fourth index cases in this group also spent an average of 3.1 minutes. The range was one to 12 minutes, and most patients (81%) were with the clinicians for one to four minutes.

The tenth index cases spent an average of 3.3 minutes. The range was one to 10 minutes and the majority (57%) were with clinicians for one or two minutes only.

PRIVACY DURING CONSULTATION

Because the health units covered ranged from Grade B dispensaries to hospitals there was more than one clinician attending patients at some of these health units. Usually where a health unit has more than one clinician in attendance each one sees patients in a separate room. In our study clinicians in 29 health units shared the same consultation room. Patients going to see each clinician were ushered in the consultation room together.

Furthermore while the ideal is for each patient to be with the clinician alone, clinicians in 42 health units were observed ushering in more than one patient at a time.

It is noteworthy that while clinicians in only 30.9 percent of the dispensaries visited ushered in more than one patient at a time clinicians in 75 percent of the health centres did so.

Similarly the 29 health units in which clinicians shared rooms were heavily weighted against health centres. Thus 37.5 percent of the health centres had their clinicians sharing rooms compared with 23.7 percent of dispensaries.

Still on the issue of privacy, only 48 health units or 41.7 percent of the health units had curtain trolleys.