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QUALITY OF HEALTH CARE IN PRIVATE CLINICS IN ADDIS ABABA

By

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Assessment of Quality of Health Care in Private Health Institutions in Addis Ababa Ethiopia

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List of Abbreviations

MOH = Ministry of Health

AIDS = Acquired Immuno Deficiency Syndrome

RHB = Regional Health Bureau

ZHD = Zonal Health Department

MCH = Maternal and Child Health

OPD = Outpatient Department

ANC = Ante Natal Care

GP = General Practitioner

HO = Health Officer

AAU = Addis Ababa University

MF = Medical Faculty

DCH = Department of Community Health

CSA = Central Statistics Authority

Abstract

Involvement of the private sector in provision of health services has progressively increased in many developing countries including Ethiopia. Promotion of the private sector involvement is also one of the health care financing strategy in Ethiopia.

A cross sectional descriptive study was done on Quality of Care in private clinics in Addis Ababa in April, 2000. Different levels of clinics were randomly selected and assessments were done on structural aspects, performance of health workers in polyclinic outpatient department and patients satisfaction with the different aspects of care given.

It was found that most clinics fulfill the structural requirements of the MOH with regard to staffing, equipment and medications. Neverthless few clinics were found not to fulfill the minimum requirements put in the guideline. With regard to performance, various aspects of malperformance were observed where the highest problem was concerning treatments given to patients.Thirty seven percent of treatments given to patients were rated to be unacceptable. Over prescription of antibiotics and injections was also found specially in small clinics. Patients were generally satisfied in all aspects of medical care where highest satisfaction was in relation to courtesy of providers and relatively lower satisfaction with cost.

Findings are discussed in comparision with findings in public and private health facilities in Ethiopia and other countries. It is recommended that regulation be strengthened. Inclusion of the assessment of process of care in quality control measures is also recommended.

Introduction

The role of the private sector in financing and provision of health services in developing countries seems to have grown within the past two decades. The low budget allocated to governmental health services associated with public sector inefficiencies and the increasing demand for modern health services which these governmental health services could not meet are considered as the main causes for the proliferation of the private sector in these countries (1).

At the beginning of the 1990's, the private sector accounted for 87.9% and 39.8 % of hospitals and hospital beds in Bombay, 37% of health expenditure in Iran, over 30% of hospital beds in Nigeria, 22% of the total number of hospitals in Thailand and more than 50% of the ratio of private doctors to all registered practitioners in South Africa and Zimbabwe (1,2,3).

In Ethiopia the government has been the major source of fund for the health sector like many other developing countries. However the amount allocated to this sector has been very low. Per capita health expenditure between 1980's and 1990's has remained between 1 and 1.10 USD. It has reached only to about 1.20 USD in 1996. This is low when compared with the per capita health expenditure for lowest income African countries which was 3.19 USD (4,5,6).

Recognizing the existing underfinancing and the inability of the government treasury to meet the growing need of modern care and the intended provision of health services, the MOH has considered different alternative methods of financing health services which include improving government sector efficiency, generating new resources of revenue, promoting private sector

participation, eliciting donor support and developing social and health insurance schemes (4). Encouraging the private sub-sector is believed to relieve the government by shifting some of the patient load (patients that can afford to utilize the private sector), there by freeing up government funds to serve those who cannot afford to pay for such services. Private providers are also considered to be sensitive to consumer demand and have strong incentive for responding to the higher quality demand of their paying clients. Improved efficiency resulting from competition between providers is also expected to occur (4,5).

With the present favourable policy compared to the past, the number of private institutions in the country has rapidly increased in the recent past. However, there are only few studies that looked at the performance of these units. Therefore, the present study is believed to contribute in generating information concerning the activities of the private sector in health in the country.

Literature Review

In most developing countries the primary source of finance for health care was by public systems through tax revenues and external foreign aid contributions to the national budgets. The great majority of the population is served through public facilities which includes government hospitals and health centres. Facilities are generally underfinanced and with insufficient staff. The situation was aggravated due to the worsening economy in the 1980's. The global recession, depressed commodity prices; the debt crisis and drought in Africa led to falling per capita incomes, rising unemployment and cuts in social expenditure (7). National health expenditure in sub Saharan African countries was declining steadily both in absolute allocation and in relation to the total budget. Rapid population growth made per capita expenditure to decline more sharply than national health expenditures. The strain on the national health budget was worsened due to the emergence of new diseases such as AIDS. It was increasingly difficult for governments to operate public sector facilities. Such pressures upon the government budgets for health led to private sector expansion (1,8,9).

Privatization is among the major reforms emphasized in adjustment programmes. The private sector is considered to be more efficient than the overextended African public health sector. Additionally it is suggested that promotion of the private sector will generate extra resources to the urban and rural poor (1).

Some authors have expressed their doubt on the efficiency of the private sector. They argued that although economic theory would suggest that private providers are more efficient technically, tendency to over provide services combined with higher prices, may mean that

fewer people are adequately treated. A number of problems associated with the growth of the private sector have also been expressed. Most widely mentioned problems include (1, 2, 3):

1. Concerns for profit: This is available in any private market. The situation is more complicated in health care due to imperfect information. Patients usually have limited knowledge of the medical feature of their disease and the most appropriate treatment for it. Due to this the health care provider can potentially manipulate the type of care provided so that it furthers his own interest than that of the patient by over investigating and over prescribing.

2. Ignoring public health: The apparent focus of the private for profit sector is on curative care. Preventive activities like immunization and water and sanitation improvements are public goods which are available even to those who have not paid for them. Such services will be under produced if left to the private sub-sector.

3. Poor integration with government services: Often reporting of activities in the private sector is not properly undertaken which makes health sector planning difficult, particularly when forming public health strategies.

4. Exodus of professionals from public sector due to income differences worsening staff shortage in public institutions.

5. Poor quality medical practice due to isolation from peers which may contribute to a decay in medical skills and endanger professional ethics.

Given this problems in the private sector, the behavior of private providers is believed to depend critically on the environment in which they exist. Different methods of regulatory mechanisms suggested are discussed below.

Regulation of the private sector

Relations between the state and the market are complex specially when coming to the health sector. Since there is substantial market failure in health, greater public involvement is needed than other aspects of the economy. Economic theory indicates the three main reasons for the state to interfere in health market: to ensure the right production and consumption of interventions that provide public good or externalities; to avoid the waste and inequity of unregulated, private voluntary insurance for costly health interventions; and to protect the poor, who can afford little or no care or insurance out of pocket (10).

According to Musgrove, governments can intervene to affect the outcome of a private market by five instruments (10). These are:

1. Provision of information either to consumers, health care providers or suppliers of health care inputs.
2. Regulating whereby they determine how a private activity may be undertaken by setting standards.
3. Mandating by setting specific mandates, the most important of which includes the requirements that employers provide health services or insurance to their employees.
4. Financing health care with public funds.

5. Providing health services using publicly owned facilities and civil staff.

Sara Bennet et al have tried to develop a conceptual framework of the main players in the regulatory process of private providers and the key relationship between them. The government, professional bodies, third party payers, consumer organizations and consumers are all described as main agencies in the regulatory process. The role of the state is more or less similar to what have been explained above. Its influence is related to its power bases such as legislative power, power over resources and power over information. The state can also give authority to professional organizations to monitor and enforce standards of care in the private sector. Professional bodies can institute medical audit techniques, establish regulatory review bodies or introduce accreditation schemes. Medical audit, for example, may consider diagnostic, investigation and prescription patterns, length of hospital stay and treatment given. In some countries like Malaysia, professional organizations set fees as guidelines for private doctors, though it is difficult to ensure that they are adhered to (3).

Purchasing agents (small private insurance schemes, large compulsory health insurance, medical benefit schemes or the state itself) may use monopoly power to negotiate prices with private providers. The adoption of different payment mechanisms may also have a direct effect upon provider behavior. Individual consumers also can have a direct control over providers through their purchasing power. They can shift their demand from provider to provider depending on the quality and cost (3).

Situation in Ethiopia

As mentioned in the introduction, health services in Ethiopia were mainly provided by the public sector. However, the performance in this facilities are poor due to several factors such as lack of resources, unmotivated staff, inefficiencies and poor management (5). All these factors together with the favourable health policy issued in 1993, which includes promotion of participation of the private sector as one component, led to proliferation of private health practice in the country (11). The first regulation for the control and licensing of private health institutions was also given by the MOH in 1994. The guideline states different requirements to be fulfilled for licensing different types of private clinics (12).

Given the above conditions the growth of the private sector has been reported to be very fast. In one analysis done in Oromiya region alone (one of the 11 regions), the number of small clinics were reported to grow from 62 to 221, medium clinics grew from three to 25 and the total number of private institutions was reported to grow from 66 to 250 within three years (13).

Haile Mariam using organizational theories have tried to analyze the direction of the privatization reform in Ethiopia. He predicted that institutional forces, mainly competitive and mimetic isomorphism as playing the dominant role in the observed changes. The role of coercive forces was stated to be minimal. According to his analysis, although normative forces are not stronger at present, it seems that they will play the dominant role in shaping the structure and behavior of the health services and the direction of privatization in the future (14).

In 1998 a cross sectional study to assess the MOH guidelines for licensing private clinics was done in seven regions of the country. Heads of RHBs, owners of private clinics and patients were interviewed. The research indicated that there is weak supervision and monitoring. Public complaints of poor quality of care, lack of drugs, high fees and unnecessary investigations and prescriptions was reported by heads of RHBs. However in the results from the patient interview, patients were generally reported to have good opinion of private providers. Fiftey three percent of sampled patients preferred to visit private clinics first before the public.

With the given information, the present study tried to assess the quality of care in private clinics using different parameters discussed below.

Assessment of Quality of care

Quality has been defined by Roemer and Aguilar as the degree to which the resources in health meet specific standards (15). Donabedian has commented that quality can have several legitimate and possible definitions depending on what one looks for during assessment. According to him the definition depends on whether one assesses only the performance of practitioners or also the contribution of patients and of the health care system; on how broadly health and responsibility for health are defined; on whether the maximally effective or optimally effective care is sought. He developed the three widely used parameters of quality assessment from which inferences can be drawn about the quality of care. These parameters are structure, process and outcome. A number of studies of quality of care assessment has used this classification either individually or in combination (16).

Structure represents the attributes of the setting in which care occurs. This includes material

resources such as equipment and facilities, human resources such as number and qualification of persons and organizational structure. The underlying concept in structural assessment is to decide whether care is provided under conditions favourable for good health care or not. Researchers are mostly attracted to structural assessment of the quality of care because they are relatively easy to measure (15,16).

There are a number of structural assessments done in governmental facilities to assess the availability of equipment, supplies and medications for selected programmes in primary health care in many developing countries. Among such studies involving targeted services are, assessment of facility-based child survival studies which are designed to determine the extent to which children are properly diagnosed and effectively treated at health facilities. Components of these assessment include observation of inventories of available equipment and supplies, observation of health workers performance, exit interview with patients, review of clinic records, and interview with health services personnel. Bryce J et al reported the results of such studies in ten African countries (Malawi, Brundi, Nigeria, Togo, Guinea, Swaziland, central African Republic, Zaire and Cotde Ivory). Problems of structural deficiencies were reported in some of the countries. For example, only 41% of all the facilities sampled were found to have Chloroquine tablets in stock in cotde Ivory. When analysed by the size of the facility, 75% of the larger facilities in district hospitals had chloroquine in stock, compared to with only 20% of the dispensaries in more rural areas (17).

Similar studies were done in Ethiopia (South and southern nationalities region) in 1996. Nineteen health facilities from the five woredas in the region were sampled to assess the quality of child care at these facilities. Results indicated that majority of the facilities had all essential

equipment available as well as adequate seating, potable water and latrine. Over 40% of the facilities were reported to be lacking at least one essential medication on the day of the survey and 74% of facilities had experienced at least one stock out of essential medications in the previous month (18).

A structural assessment involving private clinics was done in 1990 in Jamaica. Public and Private clinics were compared and it was reported that the private clinics tended to be in better condition, better equipped and supplied, and better able to provide certain labratory tests in timely manner. The higher level public clinic were reported to have a tendency of showing an overall profile resembling that of the private clinics, being better equipped and supplied than the basic clinics (19).

Process refers to the performance of health practitioners. It has two components: technical aspect and interpersonal skill. Technical performance depends on the knowledge and judgement used in arriving at the appropriate strategies of care and on skill in implementing those strategies. The goodness of technical performance is judged in comparison with the best in practice. The best in practice, in its turn, has earned that distinction because, on the average, it is known or believed to produce the greatest improvement in health. This means that the goodness of technical care is proportional to its ability to achieve those improvements in health status that the current science and technology of health care have made possible (20).

Studies of the process of care can lie on direct observation or review of medical records. Direct observation is a widely used method; however it has certain limitations in that it is costly and time taking. A possibility of observation bias is also there; although those who have used it

comment that the presence of the observer is very soon forgotten and the subject lapses into his routine. The other method of assessing performance is from the medical record. This method has the advantage in that it is less time taking and more easily subject to checking by several judges. Its limitation is that records are often incomplete. Some even say that this method is rather an assessment of recording than care (16,20).

The criteria and standards of assessment can also be either implicit or explicit. Implicit criteria are used when an expert practitioner is given information about a case and asked to use personal knowledge and experience to judge the goodness of the process of care. By contrast, explicit criteria and standards for each category of cases are developed and specified in advance, often in considerable detail, usually by a panel of experts, before the assessment of individual case begins. The difficulty with explicit criteria is that the criteria cannot easily take account of the variability among different cases. It is still necessary to subject each case of questionable care to a judgement by expert physicians who are given all the relevant facts and expected to use not only the explicit criteria but also the much larger set of internalized implicit criteria which governs the care of individuals in all their complexity (16, 20).

Morehead reported a study of medical auditing done in 1966 in USA. Performance of 16 family physicians were assessed by reviewing patients' documents and interviewing the physicians. Data was collected by senior clinicians. Items evaluated include record completeness, diagnostic management, treatment and follow up given. The physicians assessed were grouped into four classes, each representing different level of medical practice. Arbitrary lines were drawn at 45, 60, and 75 percent. It was felt that a physician receiving a score of 61 or higher was practicing an acceptable quality of medical care. Those scoring between 46 and 60 were

considered to have below average performance levels, and those with scores of 45 or less were judged to be rendering a poor quality of medical care (21).

Inayat et al have used observation method to assess the performance of physicians in private clinics in Karachi in 1998. Two hundred one private doctors were observed when consulting patients. The details of the consultation process were recorded and later evaluated based on a guideline prepared before the study by a panel of ten experts. The results indicated that practitioners often reached standard diagnosis more often than they provided standard therapy. The average number of drugs per encounter was high, and over use of antibiotics was reported to be common (22).

A comprehensive quality of care assessment study involving eight primary health programmes in five selected regions of Ethiopia was done in 1997. In the evaluation of the process aspect of care, knowledge of health workers was reported to have an acceptable level but poor performance in diagnosis and management has been reported in specific programmes like ARI (Acute Respiratory Infection) and STD (sexually Transmitted Diseases) control. Severe forms of irrational drug use were also reported in this programmes (23).

Outcome denotes the effects of care on the health status of patients and population. Measurement of the effects of outcome, such as changes in infant mortality rate is generally more difficult to carry out and is less frequently done. For example, calculation of the infant mortality rate in one district requires the collection of accurate information on all births and all deaths of infants in the district. This is usually unavailable in most developing countries. Either the birth or death or both can be missing. Even if these registrations are available, additional

problems are faced in the interpretation of outcomes. How can one be sure that the changes in mortality status are attributable to changes in health services? These can be due to improvements in economic situation so that a better nutrition was available or better water supply was available resulting in improved environmental conditions. Controlling for such environmental factors usually require numerous areas of observation, sophisticated statistical technique and greater expenditure on research (15). Another dimension of outcome may be determined through measurement of patient satisfaction with services. Patient satisfaction is included under a broad definition of health status (15,16).

Consumer satisfaction has gained a considerable attention as a measure of quality health services since the 1980's. A number of studies have been done to assess patient satisfaction ranging from small ad-hoc type to highly financed research which include service reorientation as an integral element (24).

According to Williams, patient satisfaction questionnaires have their origin in two separate developments. One is related to improving compliance where the rise of doctor-patient interaction research in the 1950s, helped place the patients' perspective firmly on the agenda. The utilization of questionnaires for the quantification of patients' evaluations facilitated the discovery of a link between three types of compliance and what had come to be seen as patient satisfaction: appointment keeping; behavioural intentions to comply with recommended treatment; and medication use. The relationship with compliance has been used to argue for the importance of satisfaction as a necessary health service goal. Since high quality clinical outcome is dependent on compliance, which, in turn, is dependent on patient satisfaction the latter has come to be seen as a prerequisite of quality care. Consequently, this has helped

legitimize the importance of the patient's perspective among health care professionals who are primarily concerned with clinical outcome. The second development is related to introducing consumerism. The late 1960s and early 1970s saw the increasing involvement of the consumer in all walks of life. While the consumer movement has pressed for organizational and structural changes, the guiding principle has been a belief in the value of the consumer's opinion. The result of this pressure on the health service is manifest in a shift in the definition of quality utilized. If the patient is to be served then he or she must have a voice in the process of medical care. Satisfaction has therefore come to be seen as a legitimate health care goal, desired outcome in itself, not solely as a means of improving compliance (24).

Locker and Dunt have commented the need to interpret expressions of satisfaction in the context of some understanding of the rationale that underlies those expressions rather than being taken at face value. As patient satisfaction is a recognized component of quality assurance, equating high levels of satisfaction with high levels of quality of care will be misleading because different studies which explored the relation between patient's expectations and overall satisfaction has consistently suggested that patient's with lower expectations tend to be more satisfied. It is also evidenced that expectations vary according to knowledge and prior experience, and are therefore likely to change with accumulating experience (25).

Many satisfaction surveys consistently give high rates of satisfaction. This has been a problem for researchers due to the lack of response variability. The need to examine detailed patient characteristics in order to get response variability have been suggested by some researchers. Demographic characteristics such as age, educational attainment, socioeconomic status and to a lesser extent gender and ethnicity are some of the factors considered to influence measured

satisfaction ratings (25, 26).

However, the key aspect in response variability is considered to be a conceptual issue which is the multidimensional nature of satisfaction (25,26). Several class of components of satisfaction have been proposed at different times. Ware's taxonomy which has eight dimensions has been the basis for many studies (26). The eight components are:

- interpersonal manner
- technical quality of care
- accessibility/convenience
- finances
- efficacy/outcomes of care
- continuity of care
- physical environment
- availability

Nevertheless all of the above classifications have been criticized for being based upon criteria set by management agenda and professionals rather than emphasizing lay perceptions of care (27, 28).

There are few studies which have tried to assess the criteria the public use to assess quality of care. Haddad et al have conducted a study in Guinea where they tried to identify, characterize and classify the criteria the public uses to judge the quality of primary health services. Some of the criteria they identified correspond to those used by health providers. They reported that the general public places considerable emphasis on outcomes, but little emphasis on preventive

services. The users appear very sensitive to aspects of the interpersonal relations they have with professionals and the technical quality of care provided. Five categories of a taxonomy of perceived quality were developed: (1) technical competence of the health care personnel; (2) interpersonal relations between the patients and care providers; (3) availability and adequacy of resources and services; (4) accessibility and (5)effectiveness of care. These criteria are more or less similar to those criteria and classifications used by health managers and providers mentioned above (28).

Given this review, the present study tried to use some aspects of the three parameters of quality assessment to assess the quality of care in private clinics. For structural assessment , availability of staffs, equipments and health services were included where as organizational structure and management of the health services were not included. For assessment of the process of care only assessment of technical care was done due to the subjectivity that can occur during evaluatuion of interpersonal relation. This may also necessitate the involvement of social workers which is beyond the scope of the present study. Patient satisfaction was taken as an outcome measurement. Assessment of other important outcome measures like prevalence of mortality was not tried for obvious reasons which is already mentioned in the text.

Objectives

General

To assess the quality of health care in private clinics in Addis Ababa.

Specific

1. To describe the structure of private clinics with regard to staffing, equipment and medications compared to the standard of MOH for private clinics.
2. To assess the performance of health workers working at polyclinic outpatient departments in private clinics.
3. To assess patients satisfaction in private clinics.

Methods and Materials

Study design

This was a cross sectional descriptive study on quality of care in private clinics in Addis Ababa.

Study Area

The study was done in Addis Ababa, one of the 11 regions in the country and which is also a capital city. According to the 1994 CSA, the region has a projected population of 2, 624,524 (29). As obtained from the Regional Health Bureau, there were 256 private clinics in the region (115 small clinics, 84 medium clinics and 57 higher clinics) at the time of this study. There were also three private hospitals and 51 speciality clinics. According to the 1991 (E.C.) health and health related indicators, the region had the second largest number of private clinics in the country (30).

Study unit and Sampling

Fiftey two private clinics (20%) were sampled by stratified random sampling from a list of private clinics obtained from the regional health bureau. Twenty percent was decided based on a suggested rule of thumb in sampling for quality of care study which states: if the number of units is very large (say 500-1,000), take a 10% sample; if it is of medium size (100-500), take a 20-30 percent sample; and if it is very small (less than 50), take a 30-50% sample (31). Contingency was not considered because the number of clinics were relatively high. That is according to the mentioned rule, taking a 20% sample is enough if the number of clinics were even 100 (the total number of private poly clinics at the study time were 256 which is relatively higher, so taking 20% (52 clinics) was considered to be adequate). Stratification was done by

the level of clinic and the number of clinics taken from each level was proportional to their size. Therefore, 10 higher, 17 medium, and 25 small were sampled for the study.

Performance assessment was done for all regular working hour health workers consulting patients in polyclinic outpatient services in the sampled private clinics. Specialists in higher clinics giving services related to their speciality were not included in the study. While specialists found working as a general practitioner in polyclinic outpatient services were included in the study.

Six hundred outpatients from the sampled private clinics were interviewed for patient satisfaction. The sample size 600 was calculated taking 95% confidence limit; 50% satisfaction level and 4% marginal error. All patients who came to the clinics in the day of data collection and who gave consent for the interview were interviewed until the required number was reached. Since higher clinics have higher number of patients per day as compared to smaller ones, it was decided to take as much as 20 patients from each higher clinic while at least a minimum of eight patients from small clinics. This will give 200 patients from both levels. While the rest 200 patients were taken from medium clinics, where 12 patients were planned from each.

Data Collection

Data was collected by eight general practitioners and three nurses in April. Two resident physicians (one was the principal investigator) supervised the data collection process. Data collectors were trained for three days by the principal investigator and questionnaires were

pretested first in private clinics not involved in the study.

The general practitioners collected data for performance assessment and structural assessment, while data on patients satisfaction was collected by both nurses and general practitioners.

The questionnaire for structural assessment was prepared based on the standard of the MOH obtained from the guideline for licensing private clinics. Number and size of rooms, availability of human resources, equipment and emergency drugs were checked. (Annex I-IV shows the requirements of the MOH for these variables. Some repetitions are excluded from the requirements concerning equipments whereas some equipments mentioned in lower clinics but not mentioned in the higher ones were included in the requirements). Data on availability was collected by observation except for human resources and health services provided. For human resources, it was not possible to do so for the health workers were working in shifts specially in small clinics. So data on human resources and available health services were collected as reported by the encountered health provider in a given clinic. Functionality of equipments in examination room like stethoscope and thermometers was also checked. Rough estimates were made to determine size of rooms.

Guideline format which will enable to record the details of the consultation process (histories taken, physical examinations done, diagnoses made, investigations ordered, treatments and advices given) was prepared. Data was collected by observation and document review. The data collectors (general practitioners) were in their gowns while they observe the health workers when consulting their patients. Histories were recorded by the data collector as the health worker was asking the patient (as the patient was telling the health worker). Later it was

checked with the history in the patient's card if there is any part missed. Physical examinations done were also recorded as the health worker was examining the patient by observation while findings were copied from the patient's record. If a health worker examines a certain organ but writes nothing in the card, it is stated done but not recorded. Investigations requested were copied from the laboratory request. Results of investigation and treatments given are copied again from the request and prescription paper respectively if patients returned with results of investigation while the data collector was around. Otherwise patients' card number was recorded in the format and results of investigation and treatment given were copied later. Advices given to patients were not recorded for these patients since it was not possible to get such information from the record. Since some small clinics did not have cards of patients', physical findings and diagnoses were recorded as reported by the health worker (the health workers were asked to tell their findings and diagnoses after examining the patient). Except the details of the consultation process of the first visit, follow up visits were not included in the study.

Data on patients' satisfaction were collected using a standard questionnaire prepared by the Aga Khan Health Net and Primary Health Care Operations Research (30). The quetionnarie had two parts. The first part deals with sociodemographic variables of respondents. Age, sex, marrital status and educational status of patients were collected in the first part. The second part of the questionnarie deals with satisfaction with different aspects of medical care. Patients were interviewed after they were seen by health workers and satisfaction with regard to the specific visit were asked. Patients were asked to tell their degree of satisfaction on a five scale response (very satisfied, satisfied, neutral, dissatisfied, very disatisfied).

Data Analysis

Performance assessment for higher and medium clinics were assessed by senior physicians in teaching institutions who have experience in assessment. The data collected by the general practitioners were presented to senior physicians for assessment. The diagnoses made were divided into the four major fields of speciality and two physicians from each speciality evaluated the performances by consensus (see the performance assessment format used as a guide in annex 6). Performance of health workers in small clinics was evaluated by the consensus of professional nurses (nurses with Bsc degree) who are also in teaching institutions and have the experience of training and evaluating nurses and health assistants. The assessors were not told from which facility (whether public or private) the data was collected from to control for the possibility of bias.

The three parameters were given scores to see if there is any correlation among them. Each variables in the general aspects of the structure, facilities (with exceptions), and drugs were scored one if requirements were fullfilled and they were scored zero if requirments were not fulfilled. Health services provided were also similarly scored (For laboratory services, only those laboratory services which were available in some clinics and absent in other clinics of the same level were included in the scoring). Some variables in facilities like number of rooms available were scored zero if they were below the requirement, one if they were equal to the reqirement and two if they were above the requirement. Similarly those clinics who had generators were scored two, those who had lanthrene were scored one and the rest were scored zero.

Concerning staffing pattern, supportive staffs (adminstrators, receptionists or cashiers and cleaners) were scored one if available and zero if not available. Technical staffs other than Gps and HOs were scored two and GPs and HOs were scored three and if one such type of health worker was available. The scoring in each group of technical workers was increased based on the number of regular working hour staff available (For example, if the number of GP = 1 then score = 3, if number of GPs = 2 then score = 4, if number of GPs $\geq$ 3 then score = 5). Speciality service was scored four if one type of speciality service was provided, five if two types of speciality services were provided and it was scored six if three or more types of subspeciality service were given. The same was done for subspeciality services.

Equipment were scored after classification into examination equipment, treatment equipment, Laboratory equipment and others . Each equipment in a given group were given different scores based on their cost or level of technology where equipments considered to have higher costs were given higher scores (see classification of the different equipment and their scoring in annex VIII). The scores of the different aspect of the structure were added to get the structural score for that clinic.

For performance, zero to two scores were given for histories (bad, fair, good) and physical examinations (pertinent examinations not done, partly done, completely done) and diagnoses and treatments were scored zero if not appropriate and one if appropriate. Since different cases have different number of investigations, the maximum score based on the maximum number of investigation (which was nine), was given for all cases and a given number was subtracted based on the number of unnecessary investigation in that particular case (For example if five investigations was done for a given case out of which two was unnecessary, the score for

investigation in these case will be seven). Advices given were not included in the scoring since data on these part was not collected for all patients. Then the scores in different parts of the performances was added to get the performance score of a single case. The performance score for a given clinic was calculated by adding the performance scores of the cases seen in that clinic divided by the number of cases. Since higher clinics had speciality clinics other than polyclinics in outpatient services, the performance score in higher clinics was considered not to represent out patient services. So performances of higher clinics were excluded from the correlation.

The different degrees of patient satisfaction were given scores that range between 0-4 (very disatisfied to very satisfied). All aspects of satisfaction were scored and the scores were added giving a satisfaction score of one patient. The scores of the different patients in one clinic was added and divided by the number of patients in that clinic representing the satisfaction score of that clinic.

Epi-Info version six software was used to analyse the data. Comparisons were done using chi square test. Results were expressed in absolute numbers, percentages, odds ratio and 95% confidence limits.

Spss 10.0 software was used to do correlation. Non parametric test (spearman rho correlation test) was used to see if there is any correlation between the three parameters.

Operational Definitions

Private sector in this study refers to the private for profit institutions.

Optional investigations : Investigations which may give supportive evidence to the diagnosis but which will not make a difference in the treatment.

Good history: History which contains chief complaint and most of pertinent history of present illness and past medical illness.

Fair history: History which contains chief complaint and some of pertinent history of present illness and past medical illness.

Bad history: History which lacks most of important history of present illness and past medical illness

Suturing set: Suturing set was considered available if a clinic had all the following equipment: suturing materials, needle, needle holder, forceps and scissor.

Delivery kit: Delivery kit was considered available if a clinic was found to have suturing materials, needle, needle holder, scissor, atleast two forceps, prepared cord ties and sterile cotton and gauze.

Minor operation set: Minor operation set was considered available if a clinic had surgical blade, bladeholder, suturing materials, needle, needle holder, forceps,sterile cotton, sterile gauze, and towel prepared for covering the local areas of minor procedure.

Ethical Consideration

Ethical clearance for the study was obtained from AAU, MF, DCH. Written consents was obtained from RHB and ZHD. Verbal consents were obtained from the owners of private clinics, health workers and patients involved in the study.

Results

I. Structural assessment

General

Out of the sampled 52 clinics, 47 gave consent for the study. So the study was undertaken in 47 clinics where 10 were higher clinics, 14 were medium clinics and 23 were small clinics. Of the 47 clinics six (13%) (three higher clinics and three medium clinics) were owned by non medical professionals while the rest were owned by medical professionals.

The name of the clinics were clearly put in a visible area in 41 (87%) of the clinics. All higher clinics and most medium clinics (13 (93%)) have their names in a visible area while 6 (26%) of the small clinics did not have their names in a visible area.

Despite the requirement in the guideline prices were found written in a visible area only in 5 (11%) of the clinics.

Facilities

All the clinics had tap water and electric power as water and light source. In time of electric interruption 4 (9%) (all are higher clinics) had generators to be used as light source, 10 (22%) had lantherene and the rest uses candle or kerosine lamp.

Wastes were reported to be incinerated in all the clinics. Incinerators were observed in all the clinics except one small clinic where the incinerator was found broken and dirts were seen scattered in the ground.

All the clinics fulfill the guidelines concerning the number of rooms required by type. In most clinics specially in higher ones, there were a number of additional rooms than required in the guideline. However a number of clinics does not fulfill the size requirements put in the guideline (Table 1). Three (30%) higher clinics, 8 (57%) medium clinics and 10 (43%) small clinics did not have water source in their examination room. Water source was also absent in toilets of 2(14%) of medium clinics and 11 (48%) of small clinics.

Table 1. Type of rooms by size and availability of tap water in sampled private clinics in Addis Ababa, April 2000 (N=47).

Level of clinic	Higher clinics (n=10)				Medium clinics (n=14)				Small clinics (n=23)				Total (N=47)			
	Size		Water source		Size		Water source		Size		Water source		Size		Water source	
Type of room	< req*	≥ req	Yes	No	< req	≥ req	Yes	No	< req	≥ req	Yes	No	< req	≥ req	Yes	No
1. Waiting room	50%	50%	-	-	29%	71%	-	-	57%	43%	-	-	47%	53%	-	-
2. Examination room	40%	60%	100%	-	43%	57%	43%	57%	17%	83%	57%	43%	30%	70%	62%	38%
3. Injection room	80%	20%	100%	-	79%	21%	64%	36%	57%	43%	43%	57%	68%	32%	62%	38%
4. In-patient (N=9)	11%	89%	89%	11%	NA*	NA	NA	NA	NA	NA	NA	NA	11%	89%	89%	11%
5. Laboratory	60%	40%	90%	10%	29%	71%	86%	14%	NA	NA	NA	NA	42%	58%	88%	12%
6. X-ray room (N=8)	38%	63%	75%	25%	NA	NA	NA	NA	NA	NA	NA	NA	38%	63%	75%	25%
7. Toilet	30%	70%	100%	-	86%	14%	86%	14%	78%	22%	52%	48%	70%	30%	72%	28%

* req= required

NA= not applicable

Staffing

A total of 420 staffs (both part time and full time) were reported to be available in the clinics. Of these 287 (68%) were technical staffs and 133(32%) were supportive staffs. Part time workers accounted for 31% of the staffs who were mostly technical workers.

Sub specialists and specialists working in higher clinics were added to be 75. Among this 10 (13%) were regular time workers while 65 (87%) were part time workers. (The number of part time workers does not represent actual 65 different people because one professional can work at different clinics in different days. This holds true for all the part time workers). The number of specialists working in the sampled clinics appears exaggerated because two different people having the same speciality can work in one clinic in different days. For example, in one clinic it was reported that there are two internists and three radiologists working at different days of the week. (See annex IV for staffing pattern of subspeciality and speciality by type)

Medium clinics were mostly (79%) staffed by general practitioners. The rest 21% were staffed by health officers. In one medium clinic a nurse was found giving services (examining and treating patients) at the poly clinic OPD. It was found that the general practitioner who is the owner of the clinic works in two or three days of the week while the rest is covered by the nurse. Two medium clinics reported to have sub specialists or specialists working on part time bases. Four general practitioners were also reported to be working in small clinics in part time bases.

Table 2. Staffing pattern in sampled private clinics in Addis Ababa, April 2000 (N=47).

Staffing	*H (n=10)		*M (n=14)		*S (n=23)		Total
I. Technical staff							
	*F.T	*P.T	F.T	P.T	F.T	P.T	
1. Sub-speciality	2	13	-	1	-	-	16
2. Speciality	8	52	-	6		-	66
3. General practitioners	11	5	11	7	-	4	38
4. Health officers	-	-	3	-	-	-	3
5. Nurses	18	10	5	1	15	-	49
6. Health assistants	10	3	12	4	31	-	60
7. Lab technicians	15	9	14	6	-	-	44
8. X-ray technicians	7	2	-	-	-	-	9
9. Other technical Staff	2	-	-	-	-	-	2
Subtotal	73	94	45	25	46	4	287
II. Supportive Staff							
1. Administrator	10	-	-	-	-	-	10
2. Cashier	14	2	14	-	9	-	39
3. Cleaner	15	4	16	-	16	-	51
4. Guard	13	-	6	-	-	-	19
5. Others	10	-	4	-	-	-	14
Subtotal	62	6	40	-	25	-	133
Total	135	100	85	25	71	4	420

*H= higher clinic

M= medium clinic

S=small clinic

F.T= full time

P.T= part time

Medical equipment

The requirements regarding medical equipment were mostly fulfilled at the different level of clinics. However some of the equipment put in the guideline were not observed in some clinics. Basic equipment like examination bed and thermometers were absent in three small clinics (each lacking either one of them). Three clinics (one clinic from each level) was found lacking tongue depressor. Two clinics (one higher and one medium clinic did not have infusion stand. Otoscope was absent in one higher clinic and one small clinic. Autoclave was not found in one medium clinic and three small clinics. Concerning functionality only one thermometer (in small clinic) and one weighing scale (in medium clinic) was found unfunctional which were reported with the unavailable. Table 3 shows the number of clinics that did not fulfill the requirement by the type of equipment unavailable.

Table 3. Unavailable equipment among the required list in the MOH guideline in sampled private clinics in Addis Ababa, April 2000 (n=47).

Equipment	Higher (n=10)	Medium (n=14)	Small (n=23)	Tot
1. Examination bed	-	-	1	1
2. Thermometers	-	-	2	2
3. Tongue depressor	1	1	1	3
4. Otoscope	1	-	1	2
5. Fetoscope	1	-	-	1
6. Reflex hammer	-	7	NA	7
7. Infusion stand	1	1	-	2
8. Weighing scale	3	1	-	4
9. Tourniquet	2	3	2	7
10. Catheter	1	3	*NA	4
11. Autoclave	-	1	3	4
12. Delivery kit	8	13	23	44
13. Vacuum extractor	7	NA	NA	7
14. Manual aspirator	5	NA	NA	5
15. Breast pump	7	NA	NA	7
16. Ambu bag	2	NA	NA	2
17. Suction machine	4	NA	NA	4
18. Minor operating set	1	NA	NA	1
19. Portable light	1	NA	NA	1
20. Auxillary operating light	2	NA	NA	2

*NA = Not applicable

Emergency Drugs and Medical Supplies

Private clinics are allowed to have only certain types of emergency drugs. Among the required emergency drugs, higher clinics were found to have almost all while some medium clinics did not have required drugs and medical supplies like adrenaline (one clinic), aminophylline (four clinics), alcohol (one clinic), dextrose (three clinics), and lidocaine (three clinics). Among the small clinics, eight did not have aminophylline at the time of observation, five did not have alcohol solution, five did not have lidocaine, four clinics did not have bandage and all were found to have no dextrose (See Table 4).

Although some of the requirements were not fulfilled, different antibiotics, antihelmenthics and IV-fluids were observed in a number of clinics at all levels.

Table 4. Emergency drugs and medical supplies in the MOH guideline which were unavailable in sampled private clinics in Addis Ababa, April 2000 (n=47).

Items	Higher (n=10)	Medium (n=14)	Small (n=23)	Total (n=47)
1. Adrenaline injection	-	1	-	1
2. Aminophylline injection	-	4	8	12
3. Savlon	-	-	-	-
4. Alcohol solution	-	1	5	6
5. Dextrose (40%)	1	3	23	27
6. Ergometrine	3	13	10	26
7. Hydrocortisone sodium succinate	-	*NA	NA	-
8. Lidocaine hydrochloride injection	-	3	5	3
9. Vitamin K injection	2	11	23	36
10. Hyoscine hydrobromide injection	-	1	1	2
11. Bandage of different sizes	-	-	7	7
12. Cotton	-	-	-	-

* NA = Not applicable

Health Services Provided

As one may expect, outpatient curative services are the major activities in the sampled private clinics. Inpatient services were found in 90% of higher clinics where the number of beds ranged between five to eleven. Subspeciality and speciality services according to the staffing pattern in annex IV were provided in the higher clinics and in the two medium clinics surveyed. MCH services like family planning, ANC and delivery were given only in few clinics. Four clinics (1 medium and 3 small) reported to give family planning services and 5 clinics (4 higher and 1 medium) give ANC while 3 clinics (1 medium and 2 higher clinics) reported to give delivery services. Immunization was not given in any of the clinics except one higher clinic where only immunization for hepatitis B was available. Basic laboratory tests were done in all the higher and the medium clinics. Culture and sensitivity test was done in two of the higher clinics. Only one medium clinic reported to do blood chemistry analysis while all the higher clinics were having blood chemistry tests. Three higher clinics reported to give counseling and screening service for HIV. Four small clinics were also found to give laboratory services.

II. Performance Assessment

A total of 46 healthworkers were observed for performance assessment. Twenty one were from small clinics, 14 were from medium clinics while 11 were from higher clinics. Twenty three of them were general practitioners, 13 were HAs, 8 were nurses and 2 were surgeons (working in poly clinic OPDs). In one higher clinic only speciality services were given so data for performance was not collected in this clinic while two higher clinics were found to have two poly clinic OPDs. Data were collected for both. In two lower clinics no new patient came (patients who came were either only for injection or dressing) . So data for performance assessment was not collected in these clinics. Consultation process of five patients were recorded for one physician. So the details of the consultation process starting from history taking to advices given were recorded for 230 patients.

Patients age ranged from two months to eighty two years where the mean age was 24, and the median was 23. Fourty eight percent were male while 52% were females. The average consultation time for a given patient was nine minutes. The maximum consultation time was 16 minutes while the minimum was five minutes.

Histories were rated incomplete lacking most of important history of present illness and past medical history in 27% of cases and 22% lacked some of important history of present illness and past medical history. Pertinent physical examinations were rated to be completely done in 39% of cases while in 22% of cases pertinent physical examinations were not done (see Table 5).

Two hundred sixty seven diagnoses were made in the 230 patients where the maximum diagnoses made per patient was Four. Twelve patients were investigated and treated without making a diagnoses. Thirty three percent of the diagnoses made were rated to be inconsistent with the history and physical finding. Inconsistent diagnoses were made in 33% of cases in higher clinics, in 29% of cases in medium clinics and 35% of cases in small clinics.

A total of 354 investigations were made for the patients of which 133 were in higher clinics, 164 were in medium clinics and 57 were in small clinics. Of the total investigations done, 65% were rated to be necessary for the diagnoses made, 22% were rated to be unnecessary while 12% were rated to be optional. Unnecessary investigations were 20% in higher clinics, 29% in medium clinics and 16% in small clinics.

Four hundred thirty seven drugs were ordered for the patients. The average number of drug per patient was 1.9. These number was 2 for higher clinics, 1.9 for medium clinics and 1.8 for small clinics. The number of drugs ordered were 0 in 5% of cases, 1 in 35% of cases, 2 in 32% of cases, 3 in 21% of cases, 4 in 6% of cases and 5 in 1% of cases.The treatments given were rated to be unacceptable in 37% of patients. Unacceptable treatments were given in 36% of cases in higher clinics, 34% of cases in medium clinics and 40% cases in small clinics and necessary advices were not given in 24% of cases. Fiftey six percent of the ordered drugs were in tablet form, 25% were injections, 12% were syrups while the rest 10% were others like suppositories and ointments. In higher clinics 65% of drugs ordered were tablets, 14% were injections, 10% were syrups whereas 11% were others. In medium clinics 65% were tablets, 17% were injections, 13% were syrups while 5% were others. In small clinics, 44% were tablets, 37% were injections, 12% were syrups while 7% were others (see Table 6).

Table 5. Performance of health workers in polyclinic outpatient departments in sampled private clinics in Addis Ababa, April 2000(n=230).

Level of clinic	Higher (n=55)	Medium (n=70)	Small (n=105)	T (n=230)
Patient History				
Good	22%	27%	19%	22%
Fair	56%	51%	47%	50%
Bad	22%	21%	34%	27%
Pertinent Physical examination				
Completely done	51%	50%	25%	39%
Partially done	40%	39%	39%	39%
Not done	9%	11%	35%	22%
Diagnoses Made	Higher (n=72)	Medium (n=84)	Small (n=123)	T (n=279)
Consistent	67%	71%	65%	67%
Inconsistent	33%	29%	35%	33%
Investigations done	Higher (n=133)	Medium (N=164)	Small (n=57)	T (n=354)
Necessary	68%	58%	80%	65%
Unnecessary	20%	27%	16%	22%
Optional	13%	15%	4%	12%
Treatment Given	Higher (n=70)	Medium (n=92)	Small (n=115)	T (n=277)
Acceptable	64%	66%	60%	63%
Unacceptable	36%	34%	40%	37%
Advice	Higher (n=44)	Medium (n=56)	Small (n=105)	T (n=205)
Given when necessary	79%	78%	73%	76%
Necessary but not given	21%	22%	27%	24%

*T = total

Most commonly ordered medications were antibiotics (35%), analgesics (29%) and vitamins (9%). In higher clinics antibiotics accounted for 31% of medications ordered and analgesics accounted for 29% of medications ordered. In medium clinics, 35% of medications ordered were antibiotics while 28% were analgesics. Antibiotics accounted for 45% of medication ordered in small clinics followed by analgesics (32%). Small clinics were found to prescribe significantly higher proportion of antibiotics and injections than medium and higher clinics (Table 6).

Table 6. Percentages of antibiotics, analgesics and injections prescribed in sampled private clinics in Addis Ababa, April 2000.

Medications	Higher clinic (n=113)	Medium clinic (n=130)	Small clinic (n=187)	x^2 (p-value)
Antibiotics	31%	35%	45%	*12.44 (0.002)
Analgesics	29%	28%	32%	1.58 (0.45)
Injections	15%	17%	37%	*25.88 (0.0000)

III. Patient satisfaction assessment

A total of 600 patients (200 from each level of clinic) were interviewed for satisfaction with the medical care rendered. All patients interviewed were patients who went to the given clinic for medical consultation for a certain complaint except 16 patients in small clinics who went for injections only. Satisfaction with time spent with the provider, competence of the provider and information given by the provider was not filled for these patients who went to the clinics for injection only. Twenty-one patients (4%) stated that they cannot comment on satisfaction with competence of health providers and fifty-two individuals refrained from commenting on whether they will recommend the clinic for someone else or not. Most of these patients said they want to see the outcome first. (Table 7 shows the socio demographic distribution of respondents).

Of the respondents 51% were using the respective clinics for the first time while 49% had used the respective clinics before. Most (93%) responded that they could reach to the clinics easily. Time spent to reach the clinics was reported to be less than 30 minutes by 95% of the respondents, 30 minutes to 1 hour by 4% of the respondents and 2% reported that they spend more than an hour to reach to the clinics. Most (59%) came to the clinic walking, 37% used transportation (taxi/bus) and 3% used private car to reach the clinic.

Table 7. Demographic characteristics of respondents by level of sampled private clinics in Addis Ababa, April 2000(n=600).

Demographic variable	Number	Percent
Age		
18-34	392	65%
35-54	156	26%
55+	52	9%
Sex		
Male	298	50%
Female	302	50%
Marital status		
Single	279	47%
Married	298	50%
Divorced and separated	23	4%
Educational status		
Illiterate	79	13%
Primary education	145	24%
Secondary education	291	49%
Tertiary education	85	14%

High rates of satisfaction were generally reported in all aspects of medical care (65%-99%). Courtesy of provider was the aspect where satisfaction was rated highest (99%). Few (1%-37%) patients reported dissatisfaction in any aspect of the medical care received. The aspect of care where dissatisfaction was reported highest was cost with 37% reporting dissatisfaction. Information provided was the other aspect where satisfaction was rated less as compared to the others (Table 8 shows the rates of satisfaction for the different aspects of medical care).

Ninety two percent of the respondents reported that they have got the services they needed to treat their problems at their visit while 8% reported that they did not get the services they needed. Most of these respondents were seen in small clinics. Out of these patients who reported unavailability of services they needed, 59% mentioned unavailability of diagnostic investigations (laboratory, x-ray and ultra-sound), 27% reported unavailability of drugs while 2% mentioned unavailability of senior professionals and others. Eighty four percent of the patients said they would recommend the services at the given clinic for someone else while 8% reported that they would not recommend. Most of the patients who said they would not recommend the given clinic for someone else were dissatisfied at least by one aspect of the given clinic. Fiftey nine percent of them stated dissatisfaction with the cost while 37% reported dissatisfaction with the information given to them about their illness.

Table 8. Patients Satisfaction with different components of medical care in sampled private clinics in Addis Ababa (n=600).

Aspects of medical care	* V. sat	Sat	* Neut	* Dissat	V. Diss
	Satisfied		Dissatisfied		
Adequacy of service hours	59%	33%	5%	2%	1%
	92%		8%		
Waiting time	53%	43%	2%	1%	1%
	96%		4%		
Time spent with health worker (N=584)	56%	38%	4%	2%	1%
	94%		7%		
Cleanliness of waiting area	45%	45%	7%	3%	-
	90%		10%		
Cleanliness of examination room	45%	46%	7%	2%	-
	91%		9%		
Cleanliness of equipments	45%	45%	8%	2%	-
	90%		10%		
Courtesy shown by health worker	78%	22%	0.5%	0.3%	-
	99%		1%		
Privacy during examination	64%	27%	2%	2%	-
	96%		4%		
**Competence of health worker (N=584)	48%	37%	9%	2%	-
	85%		11%		
Information given by health worker (N=584)	41%	42%	10%	5%	3%
	83%		18%		
Cost of services	16%	48%	20%	16%	1%
	64%		37%		
Effectiveness of services (n=293)	44%	51%	3%	2%	-
	95%		5%		
Overall satisfaction	48%	46%	5%	1%	-
	94%				

*V. sat = very satisfied Neut .= neutral Diss = dissatisfied

** 4% of patients said they can not comment this aspect of care

Analysis of overall satisfaction by the sociodemographic variables of respondents showed that females, older age group (55+) and married respondents were more satisfied as compared to males, younger age groups and single respondents respectively. But these differences were not statistically significant (Table 10). Statistically significant difference was observed in the bi-variate analysis for literacy status where respondents who have secondary education and tertiary education were less satisfied as compared to the illiterate respondents. In the multi-variate analysis the finding was insignificant for those who have tertiary education.

Table 9. Degree of overall satisfaction by sociodemographic variable of respondents in sampled private clinics in Addiss Ababa, April 2000 (n=600).

Variable	Satisfied	Dissatisfied	OR (95%CI)	*Ad. OR (95% CI)
Sex				
Male	275	23	1	
Female	289	13	1.86 (0.88-4.08)	1.36 (0.67-2.76)
Age				
18-34	369	23	1	
35-54	144	12	0.75 (0.35-1.70)	**VHN
55+	51	1	3.18 (0.49-133.48)	VHN
Marital status				
Single	262	17		
Married	282	16	1.14 (0.53-2.47)	VHN
Divorced and separated	20	3	0.43 (0.11-2.50)	VHN
Educational status				
Illiterate	78	1	1	
Primary education	141	4	0.45 (0.01-4.69)	0.18 (0.02-1.39)
Secondary education	268	23	0.15 (0.00-0.95)	0.28 (0.08-0.98)
Tertiary education	77	8	0.12 (0.00-0.97)	0.85 (0.35-2.07)

*Adjusted OR for sociodemographic variables and level of clinic

** Very high numbers which were not significant

IV. Scoring and correlation between the three parameters

The highest structural score for higher clinics was 188 and the lowest score was 123 (Mn = 155.3, S.D = 20.1). Fourty percent of the clinics scored above the mean score. For medium clinics, the maximum score was 108 and the minimum was 84 (Mn = 95.5, S.D = 5.6). Fifty percent of the clinics were found to be above the mean score. In small clinics the score ranged between 40 and 54 (Mn = 47.5, S.D = 3.7). Fourty three percent of the clinics scored above the mean score.

Performance scores ranged between 9.3-11.8 (Mn = 10.2, S.D = 0.79), 8.7-11.4 (Mn = 10.3, S.D = 0.78) and 9-11(Mn = 10, S.D = 0.62) in higher, medium and small clinics respectively. Performance scores were above the mean scores in 40% of higher clinics, 57% of medium clinics and 38% of small clinics.

The maximum score for patient satisfaction was 44.6 in higher clinics and the minimum score was 40.5 (Mn=42.2, S.D=1.34). Forty percent of the satisfaction scores were above the mean. In medium clinics the satisfaction score ranged between 35.3 and 45.4 (Mn= 42.1, S.D=1.34). Seventy one percent of the scores were above the mean score. In small clinics the satisfaction score was between 32.6 and 44.6 (Mn= 36.4, S.D=3.2). Fiftey two percent of the scores were above the mean score.

Correlation among the three parametrs was significant only for structure and patiient satisfaction (See Table10).These was also found by chi-square test where satisfaction in all aspects of medical care (except cost) was found to increase significantly as the level of clinic

increases (Result not shown). However there was no significant correlation between the three parameters when correlation among the three parameters was done for each level of clinic (see Table 11-12).

Table 10. Correlation of structural, performance and patient satisfaction scores in sampled medium and small clinics in Addis Ababa (n=35).

	* Patient satisfaction	Performance
*Structure	0.659	0.19
P-value	0.000*	0.275
Patient satisfaction		0.054
P-value		0.757

* Higher clinics were included in the correlation between patient satisfaction and structure.

Table 11. Correlation of structural, performance and patient satisfaction scores in sampled medium clinics in Addis Ababa (n=14).

	Performance	Patient satisfaction
Structure	-0.076	0.002
P-value	0.797	0.994
Performance		-0.43
P-value		0.125

Table 12. Correlation of structural, performance and patient satisfaction scores in small clinics (n=21).

	Performance	Patient satisfaction
Structure	0.002	0.313
P-value	0.994	0.167
Performance		-0.107
P-value		0.644

Discussion

The study was done in 90% of the sampled clinics. As already mentioned in the result section five clinics refused to give consent for the study. Reasons mentioned included that the data collection process would interfere their activities and the interview process may offend their clients (patients). Some did not give clear reasons for refusal. Although reassurance was given that patients would be interviewed based on their informed consent and study findings would be confidential, it was not possible to gain their consent. During the visits to ask consent (two to three visits were made in these clinics since responsible person were not available sometimes and at othertimes descisions were not told at once), it was possible to know that poly clinic OPD in one of the medium clinics was staffed by a nurse which is against the guideline of staffing pattern for medium clinics. Otherwise no information is known about these clinics.

The structural requirements with regard to staffing, equipments and medications in the private clinics were found to be fairly fullfiled in most of the clinics. This is opposite to public facilities where researchers have indicated a number of deficits in different programmes (17,18). Neverthless it is worth mentioning at this point that the possibility of private providers changing their structure specifically for the data collection time has been considered. This issue is raised due to the knowledge that private clinics are often criticized for changing their structure to fulfill the MOH standard when supervisory visits are done by the ZHBs, since they know beforehand when supervisory visits are done. It is our belief that since the study was done based on thier informed consent (Providers were told that this was a student research and has nothing to do with supervision. Moreover results would be confidential in that they would not talk about a specific clinic) and since the specific date of data collection was noty told, the

possibility of such bias is minimum. In a study done in 1998 to assess reproductive health provision and potentials in the private for profit sector, it was reported that most of the private clinics have got equipments and facilities compatible with their level. These study had also mentioned that a serious shortasge of equipments and consumables for reproductive health service provision had been found (32). Another study done recently by Biru which assessed structural requirement concerning staffing pattern has reported that staffing pattern in Addis Ababa was well above below the minimum requirement of the MOH (33). Since private clinics are highly commercialized and competitive, availability of staff and equipment is highly likely so that patients will be attracted. Private providers are commonly criticized for acquiring high technology equipment and for unnecessary use of these resources to cover costs rather than for unavailability (3). Studies done in India and Jamaica have also reported private health facilities as being well equipped (2,19).

However few clinics were found to be structurally below the standard set by MOH for equipment requirements. Polyclinic OPD in one medium clinic was found staffed by a nurse which is also below the standard of the level of clinic. Similar situations were found in Zambia where private clinics are in theory staffed by fully qualified medical doctors while in practice, some are often staffed by clinical officers and nurses (34). In India, private doctors have been reported to hire unqualified people to man their health care facilities due to shortage of qualiffied staff (35). Private providers in poor areas cutting costs by hiring less costly unqualified staff was also reported in India and Thailand (3).

Three small clinics and one medium clinic were found to have no autoclaves at the time of the

study. Such practices are risky and should be strictly controlled specially in these era. Poor sterilization of instruments have also been reported in Indian private hospitals (2). Incinerators were observed in all clinics in this study except one. This is much better when compared to results in the Indian study where most nursing homes and clinics were reported to have no incinerators. Wastes such as surgical materials and dressing materials were stated to be thrown in public dust bins causing hazards to the residents (2).

A number of professionals were found out to work in part time in private clinics specially in higher ones. A similar finding was reported in previous study in the private sector in different regions of the country (7). Other countries like Thailand and India have similar experience where many public physicians work in the private sector in their spare time (2, 36). While this practice is believed to reduce the risk of proffessionals leaving the public sector eventually, neglect of public sector duties is a perceived problem in many countries. Conflict of interests where physicians meet patients in the public sector and persuade them to take any further care in the private sector was reported in Brazil (1).

Few clinics reported to give preventive health services like immunization and familiy planning. This is not surprising since preventive health services like immunization are not attractive for market approach. However, in countries like Pakistan, Malaysia and India private providers are reported to give preventive medical care particularly immunization for children (3). In one study in Papua Guinea, all private doctors were reported to give ANC and Immunization while 66% were offering delivery services (37). Governments in some countries like malaysia, Iran and Nigeria have instituted payments or provision of free supplies as an incentive for private providers to offer preventive services (3).

In this study various ranges of sub-optimal performance was found in different aspects of the consultation process, treatment practice being the major one.

Diagnoses made were rated inconsistent in 33% of cases. This figure was 33% in higher clinics and 29% in medium clinics. This is much higher as compared to results in Karachi where diagnoses made were reported to be inconsistent only in 2% of cases (23). However in the study done in Karachi, it was reported that symptoms were given as diagnosis in 30% of cases. It was in very few patients in the present study that symptoms were put as diagnosis where they were rated to be inconsistent diagnoses. Inconsistent diagnosis was made in 35% of patients in small clinics. This is lower as compared to a study done in public facilities in papua Guinea, where inaccuracies of diagnoses by paramedicals were reported to be 55% (38). Similar finding were found in Tanzania where 55% of diagnoses made by PHC workers were reported to be inaccurate (39).

Twenty two percent of the total investigations done were rated to be unnecessary. A previous study in the counry has also reported public complaints of unnecessary investigations. Over provision of care by private providers have also been documented in other countries like Bombay and Thailand (2,3).

The average number of drugs per patient was two. This is lower as compared to the findings in India and Karachi which was 2.9 and 3.6 (22,40). This finding is also similar to a study done in public hospitals in seven regions of the country where the average number of drugs per patient was two (40). Antibiotics (35%) and analgesics (29%) were the most common class of

drugs prescribed. Similar findings were found in public hospitals in Ethiopia where antibiotics (27%) were the most common drugs ordered followed by analgesics (19%) (41). In India the most common drug ordered by private GPs was anti-infective drugs (26%) (including antibiotics and sulphonamides) followed by nutritional supplement (22%) and analgesics (17%) (40). However, the percentage of antibiotics and analgesics ordered were higher in the present study as compared to both private practitioners in India and pubic hospitals in Ethiopia. Antibiotics are also found to be ordered more in small clinics by lower level professionals as compared to higher and medium level clinics. At this point it is worth to mention the fact that most lower clinics do not have patient cards (they are not required to have cards) resulting in poor documentation. This indicates a problem in one important aspect of quality and needs attention both by regulatory bodies and private providers.

Twenty five percent of the ordered drugs were in injection forms. It was also found that small clinics order more injections as compared to medium and higher clinics. Increased use of injections in private facilities was also reported in India where a third of patients attending a private facility were given one or more injections (40). It has been documented in Uganda that new small private clinics have created a culture in which patients associate good care with injections and other drugs regardless of appropriateness of care (3).

In this study, 37% of treatments given were found to be unacceptable. Although this is lower as compared to the study in Karachi (60%), it is a significant number which needs serious consideration. Unacceptable treatment was higher as compared to inconsistent diagnosis which is similar to findings in Karachi where private practioners reached standared diagnosis more often as compared to standared treatment (22).

In analysis of patient satisfaction, neutral responses were classified as dissatisfied considering that they may represent a subtle way of expressing dissatisfaction. This is likely since the interview was undertaken in the clinics, patients may have been reluctant to express disapproval of services. In one study of patient satisfaction, neutral attitudes has been considered to be one of resignation, associated with a feeling of not being able to do any thing about a situation even though one may feel dissatisfied (42).

High rates of satisfaction (64-99%) were found in all aspects of medical care. Similar findings were found in private clinics in Tanzania and Zambia where satisfaction with care were rated to be 71-96% and 91% respectively (34,43). Satisfaction studies done in public facilities gave relatively lower results where satisfaction with different aspects of care were found to be 41-75%, 30-80%, 64-94% in West Indies, Kyoto and Los Angeles respectively (42,44). High rates of dissatisfaction (78%) was also reported in a teaching hospital in Gondar (45).

Highest satisfaction (99%) was associated with courtesy of health providers. This is similar with the Tanzanian study where interest shown by health workers was rated 98% (44). This is expected in private health services since their service is associated with profit making, they will try to retain their patients by showing respect and courtesy. In the contrary health workers behaviour was among the major reasons for dissatisfaction in the Gondar study mentioned above (45). The behavior of health workers was rated as unsympathetic by 36% of respondents. In West Indies satisfaction with courtesy and consideration was reported to be 75%. In the USA and Japan courtesy was rated to be 93% and 80% respectively (45).

Waiting time and privacy were the next aspects where satisfaction was rated highest. Most

patients (98%) waited less than an hour to receive service. These finding was the same with the Tanzanian study (43) where 96% of patients waited for less than an hour while the average waiting time in public facilities in West Indies (44) was reported to be 2 hours and 45 minutes and 47% were reported to be dissatisfied with this. Dissatisfaction with waiting time was reported to be 20% in the USA and 30% in Japan. However we cannot take this comparisons at face value since sociodemographic differences like economic status and literacy status might confound the results.

Cost of services was the aspect where satisfaction was rated least. In the Tanzanian study cost of private health services were perceived to be high by 25% of respondents, while 68% reported the cost to be moderate. However dissatisfaction with cost did not seem to affect the overall satisfaction since the overall satisfaction was high (94%) regardless of the relatively lower satisfaction with cost. Other studies have also reported that cost affects minimally satisfaction with health care (46,47,48). However conclusion is difficult since these studies were done in public facilities where service is free or with lower cost as compared to private health services.

One may put doubt in the overall high satisfaction rate obtained in private clinics. This could be due to several reasons. Among the most important reason could be that satisfaction with care is determined among other reasons by expectation of patients which by itself is affected by prior experience with the health care (26). As already mentioned in the text private health provision is a relatively recent experience in the country. The public has been getting service from the public sector which is known for long waiting times. Singh et al have mentioned in their study the probablity that long waitings may induce patients to regard doctors as discourteous or lacking in skill (44). Some studies have also reported high disatisfaction of

patients with providers courtesy in the public sector (45). Where as courtesy of providers in private clinics is highly likely for obvious reasons. So patients might have responded by comparing their present experience with that of the public. It has been documented consistently that interpersonal skill on the part of the provider is of particular value to patients in expression of satisfaction with health services (49). Additionally, the fact that data was collected in the clinics might introduce social desirability bias.

Analysis of overall satisfaction by sociodemographic variables gave significant result for literacy status where patients with secondary level educational status were less satisfied when compared with the lower educational status. However the difference was not significant for tertiary level educational status. Other studies have reported both significant and non significant relationships (44,46,50). The difference in satisfaction between male and female was not significant in the present study. Hall and Dornan have reached to the same conclusion in their meta-analysis. They reviewed four studies showing women to be more satisfied, eight showing no difference and five showing men to be more satisfied and reached the conclusion that there is no difference between male and female regarding satisfaction (51).

Age was not found to have significant effect on satisfaction in this study. This is contrary to most studies where older age groups were shown to be significantly more satisfied than younger age groups (44,50). Neverthless some studies have reported that there is no relation ship between age and satisfaction. They have suggessted that inconsistencies in findings could be explained by other predispositional factors like confidence in medical care system and satisfaction with life in general (51).

There was no significant correlation between the three parameters of quality assessment except that patient satisfaction increased with increasing level of clinics. Patient satisfaction and structure were not correlated within the same level of clinic.This could be because that the difference in structure between two level of clinics is so obvious that patients can easily notice it while structural differences within the same level of clinic are not as noticeable as that.

Ronald has reported similar findings concerning correlation between performance and patient satisfaction where clients appreciation of services were not correlated with health workers' performance in his studies (52). Orth-Gomer et al have also reported in their study that patients report a higher satisfaction than can not be explained by medically demonstrated benefits (53). Concerning structure and performance Donabedian has commented that the relationship between structural characteristics and process of care is weak (15).

Strengths and Limitations of the Study

Strengths

1. All the three aspects used to assess quality of care have been attempted to be evaluated.
2. Observation method was used to assess performance which gives better information than records specially in countries like Ethiopia where documentation is poor.
3. Local standards have been used to assess quality of structure.
4. Consensus of two proffessionsals has been used to assess performance of health workers to decrease intraobserver bias.

Limitations

1. Five clinics refused to give consent for the study which can introduce bias if these clinics are significantly different from the study units.
2. Size of rooms is roughly estimated. So inter observer bias is likely to occur.
3. A certain degree of observation bias can not be denied when assessing performance by observation.
4. Physical findings recorded/reported were considered as correct when evaluating performance which may not be always true.
5. Symptoms put as diagnoses were rated to be inconsistent diagnosis in this study which may not be always true (One may argue that if a practitioner could not make the diagnoses, putting the symptom as diagnoses may be acceptable sometimes).

6. Consecutive patients were interviewed for patient satisfaction and for assessing performance of health workers. This was done to attain the required sample size within short days. However, this can introduce bias specially for assessing performance if similar cases were seen consecutively.

Conclusion

1. Most private clinics fullfill the structural requirement of the MOH in terms of staffing and equipment.
2. Some private clinics lack basic equipment like examination bed and thermometer and emergency medications.
3. Various degrees of sub optimal performance in different aspects of care was found in private clinics with higher sub-optimal performance with regard to patient treatment.
4. Antibiotics and injections are prescribed more in small clinics compared to higher and medium clinics.
5. Patients generally were satisfied with the different aspects of care in private clinics with relatively lower satisfaction in cost.

Recommendations

1. Regulation and supervision of private clinics should be strengthened to minimize the possibility of clinics giving service below the minimum standard.
2. Regulatory bodies should consider including the process of care in quality assessment programmes in addition to structural assessment. Measures to improve health workers performance should be introduced such as:
   - reviewing of medical records of patients regularly in a given interval.
   - distributing available standards of treatment to private providers and development of protocols of management for wider range of diseases.
   - Involvement of private practitioners in seminars and in service trainings prepared for the public sector.
   - Considering examination to health workers at a given interval with the intention of motivation for updating knowledge (not with the intention of sub standardization) with feed backs on weak areas.
3. Facilitating development of insurance schemes to protect the population from high financial burden.
4. Wider study including public sectors.

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Annex I. Requirments regarding Size of Rooms in Private Clinics .

Level of clinic	Type of rooms	Area (m.sq)
Small	1. Waiting room	20
	2. Examination room	12
	3. Treatment room	15
	4. Toilet	8
Medium	1. Waiting room	20
	2. Examination room	15
	3. Treatment room	20
	4. Laboratory	15
	5. Toilet	8
Higher Clinic	1. Waiting room	45
	2. Examination room	15
	3. Treatment room	20
	4. In-patient	45
	5. Laboratory	30
	6. x-ray room	20
	7. Toilet	8

Source: Guidelines for Licensing Private Clinics. MOH, 1987.

Annex 2. Staffing requirements in the different level clinics.

Level of Clinic	Personnel	Number
Small	Health Assistant/Nurse	2
Medium	Generalpractitioner/Health officer	1
	Nurse/Health assistant	
	Laboratory Technician	1
		1
Higher	Specialist	1
	General practitioner	1
	Nurse	1
	Health assistant	2
	X-ray technician	1*
	Laboratory technician	1
	General service	±1

*If there is x-ray service

± Depending on number of beds and types of services available

Source: Guidelines for Licensing Private Clinics. MOH, 1987.

Annex III. Medical Equipments Required in Small Clinics.

1. Examination bed
2. Examination light
3. Stethoscope
4. Sphyngomanometer
5. Weighing Scale
6. Thermometers
7. Tongue depressor
8. Tourniquet
9. Suturing set
10. Kidney dish
11. Forceps jar
12. Round basin
13. Drip stand
14. Surgical blades
15. Blade holders
16. Instrument tray
17. Otoscope
18. Boiler
19. Autoclave
20. ± Delivery kit

Source: Guidelines for Licensing Private Clinics. MOH, 1987.

Annex IV. Medical Equipments Required in Medium Clinics.

1. Examination bed
2. Examination light
3. Stethoscope
4. Sphyngomanometer
5. Weighing Scale
6. Thermometers
7. Reflex hammer
8. Tongue depressor
9. Otoscope
9. Tourniquet
10. Suturing set
11. Kidney dish
12. Forceps jar
14. Drip stand
15. Surgical blades
16. Instrument tray
17. Otoscope
18. Autoclave
19. ± Delivery kit
20. Microscope
21. Centrifuge
22. Sedimentation rack

23. Hemometer

24. Lancets

25. Slides

26. Cover slides

27. Test tubes

28. Hemocytometer

29. Bunsen burner/ spirit lamp

30. Round basin

31. Catheter

Source: Guidelines for Licensing Private Clinics. MOH, 1987.

Annex V. Medical Equipments Required in Higher Clinics.

1. Examination bed
2. Examination light
3. Stethoscope
4. Sphyngomanometer
5. Adult scale
6. Infant scale
7. Thermometers
8. Tongue depressor
9. Reflex hammer
10. Tourniquet
11. Kidney dish
12. Forceps jar
13. Syringes and needles
14. Drip stand
15. Dressing trolley
16. Instrument tray
17. Otoscope
18. Autoclave
19. + Delivery kit
20. Microscope
21. Lab bench
22. Centrifuge

23. Sedimentation rack

24. Test tube racks

25. Timer

26. Spirit lamp

27. Hemometer

28. Test tubes

29. Measuring pippetes

30. Hemocytometer

31. Round basin

32. Glass ware

33. Catheter

34. Photometer

35. Slides and cover slides

36. Lancets

37. Delivery table

38. Vacum extractor

39. Manual aspirator

40. Breast pump

41. Fetoscope

42. Resuscitator/Ambubag

43. Suction Machine

44. Minor operating set

45. Portable light

46 Auxilary operating light

47. Autoclave

48. Refrigerator

49. Diagnostic equipment

Source: Guidelines for Licensing Private Clinics. MOH, 1987.

Annex VI. List of Emergency Drugs and Medical Supplies to be Made Available in Private Clinics.

Description of Items	Level of Clinic		
	Small	Medium	Higher
Adrenaline injection			
Aminophylline injection			
Savlon			
Alcohol solution 79%			
40% dextrose			
Ergometrine injections/tablets*			
Hydrocortisone sodium succinate			
Lidocaine hydrochloride injection			
Vitamine K injection			
Hyoscine hydrobromide injection			
Bandages			
Cotton			
Disposable needles and syringes			

NB: * If service is available.

Hydrocortisone sodium succinate is prohibited in Small and Medium clinics

Source: Guidelines for Licensing Private Clinics. MOH, 1987.

Annex VII. Classification and scoring of equipments required in private clinics (scores).

A. Equipment in examination room/used for examining patients.

Examination bed (1)

Stethoscope (1)

sphyngomanometer (1)

Reflex hammer (1)

Adult scale (1)

Infant scale (1)

Thermometer (1)

Tongue depressor (1)

Otoscope (1)

Fetoscope (1)

B. Equipment in treatment room/used for treating patients

Forceps jar (1)

Instrument tray (1)

Dressing trolley (1)

Kidney dish (1)

Round basin (1)

Drip stand (1)

Catheter (1)

Tourniquet (1)

Manual aspirator (1)

Portable light (for minor procedures) (1)

Auxillary operating light (1)

Breast pump (1)

Delivery kit (2)

Delivery table (2)

Ambubag (2)

Minor operating set (2)

Vacum extractor (3)

Suction machine (3)

C. Laboratory equipments/equipments used for investigating patients

Test tubes (1)

Test tube racks (1)

Esr racks (1)

Timer (1)

Bunsen burner/spirit lamp (1)

Laboratory bench (1)

Glass ware (1)

Slides (1)

Cover slides (1)

Lancets (1)

Hemometer (1)

Hemocytometer (1)

Measuring pippet (1)

Microscope (2)

Centrifuge (2)

Photometer (3)

X-ray (4)

Ultra-sound (4)

D. Others

Boiler (1)

Autoclave (2)

Refrigerator (2)

Annex VIII . Staffing pattern of subspecialists and specialists in sampled higher and medium clinics in Addis Ababa, April 2000 (N=24).

I. Technical Staff	Higher cl		Medium Cl	
1. Sub-speciality	Full T	Part T	Full T	Part T
a. Endocrinology	1	-	-	-
b. Orthopaedics	1	2	-	-
c. Neurologist	-	3	-	-
d. Gastro-enterologist	-	-	-	1
e. urologist	-	4	-	-
f. Cardiologist	-	2	-	-
g. Neurosurgeon	-	1	-	-
h. Pneumologist	-	1	-	-
2. Speciality				
a. Internist	1	11	-	-
b. Pediatrician	2	7	-	-
c. Gynecologist/ obstetrician	3	7	-	-
d. Surgeon	-	6	-	2
e. Radiologist	-	4	-	1
f. Ophthalmologist	-	4	-	1
g. Dermatologist	-	4	-	1
h. E.N.T Specialist	-	4	-	1
i. Psychiatrist	-	4	-	-
j. Pathologist	1	1	-	-
k. Dentist	1	-	-	-

Annex IX
Structural Assessment Format

Clinic Level:_____
Owner: Professional_____ Non Professional_____ Both_____

A. General	Yes	No
1. Is the name of the clinic clearly put?		
2. Are prices clearly written in a visible area?		
B. Facilities		
3. Water source Tap water (Mention if any other) ___ .		
4. Source of light Electricity (Mention if any other)_____ 5. Source of electricity when electric power is interrupted._____		
6. Is there an incinerator?		
7. How many number of rooms are there? Function of rooms 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	Size	Water source Yes No

C. Staffing

Type	Number	Regular working hour staff	Part time staff
1. Sub-specialities (Specify)			
2. Specialities			
a. Internist			
b. Pediatrician			
c. Gynae-obstetrician			
d. Surgeon			
e.others			
3. General Practitioners			
4. Health officers			
5. Nurses			
6. Health assistants			
7. Lab technicians			
8. X-ray technicians			
9. Other technical staff (specify)			
11. Adminstrator			
12. Cashier			
13. Cleaner			
14. Other adminstrative staff (specify)			

Medical Equipments
Av = Available N-Av = Not Available
F = Functional NF = Not Functional

Type	Av		N-Av
	F	NF	
1. Examination bed			
2. Stethoscope			
3. Sphygomanometer			
4. Thermometers			
5. Tongue depressor			
6. Otoscope			
7. Examination light			
8. Weighing scale (adult)			
9. Drip Stand			
10. Surgical needle			
11. Needle holder			
12. Forceps			
13. Suturing material			
14. Scissors			
15. Umbilical cord			
16. Surgical blades			
17. Blade holder			
18. Instrument tray			
19. Forceps jar			
20. Tourniquet			
21. Round basin			
22. Kidney dish			
23. Boiler			
24. Autoclave			
For medium and higher clinics only			
25. Reflex hammer			
26. Catheter			
27. Slides			
28. Cover Slides			
29. Lancets			
30. Test tubes			
31. Measuring pippete			
32. Spirit lamp/bunsen burner			
33. Sedimentation racks			
34. Test tube racks			
35. Glass ware			
36. Timer			

37. Lab bench		
38. Microscope		
39. Centrifuge		
40. Hemometer (hemoglobin pippete)		
41. Hemocytometer (WBC pippete)		
For higher clinics only		
42. Fetoscope		
43. Breast pump		
44. Resuscitator/Ambu		
45. Manual aspirator		
46. Suction machine		
47. Portable light		
48. Auxillary operating light		
49. Dressing trolley		
50. Towels		
51. Vacume extractor		
52. Delivery table		
53. Photometer		
50. Ultra-sound		
51. X-ray		

Emergency Drugs and Medical Supplies

Av = Available N=Av = Not available

N-Ap = Not Applicable

Items		Av	N-Av	N-Ap
1.	Adrenaline injection			
2.	Aminophyline injection			
3.	Savlon			
4.	Alcohol Solution			
5.	Dextrose (40%)			
6.	Ergometrine			
7.	Hydrocortisone sodium Succinate.			
8.	Lidocaine hydrochloride injection			
9.	Vitamine K injection			
1o.	Hyosine hydrobromide injection			
11.	Bandage (different Sizes)			
12.	Cotton			

F. Health Services Provided

Health services	Yes	No	N-AP
A.Out patient services 1.Poly clinics 2.MCH services Health Education programme Family Planning ANC Delivery service PNC Immunization Growth monitoring ORT Counselling services 3.Speciality clinics Internal medicine Pediatrics Gynae-obstetrics Surgery Are minor operations done? Others (specify)			
B.In-patient Services Number of beds ____			

C.Laboratory Services Haematology Hg/Hct CBC B/F Specify others Urine Microscopy Pregnancy test Specify Others Stool O/P Specify Others Bacteriology Gm Stain AFB Stain Culture and Sensitivity Specify Others Serology VDRL Widal test Weil- felix Specify Other Blood Chemistry FBS SGOT, SGPT Specify Others			
D.Other health services (specify)			

Annex X

Performance Assessment Format

Level of clinic _____
Status of health worker _____

Patient entered at _____
Patient exited at _____

Patient's age Sex Occupation Marrital status

Chief complaint _____

Write all symptoms of the patient in the order as mentioned by the patient/as asked by the health worker.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Physical Examination

D = Done N-D = Not Done

Vital Sign	D	N-D	Finding
Respiratory rate Pulse rate Blood Pressure Temperature (touch/thermometer)			
System			
A. HEENT			
Head			
Ear (otoscopic examination)			
Eye (ophthalmoscope examination)			
Nose			
Throat			
Other examination done (specify)			
B. Glands			
Lymph Nodes Sub mandibular Cervical Supra clavicular Axillary Inguinal			
Thyroid			
Breast			
Other examination done (specify)			
c. Respiratory system			
Inspection			
Palpation (tactile fremitus)			
Percussion			
Auscultation			
Other examination done (specify)			

D. Cardiovascular system			
Inspection JVP			
Auscultation At the base/only one area All areas			
Palpation heave/thrill			
Other examination done (specify)			
E. Abdomen			
Inspection			
Palpation Liver Spleen Kidney All areas			
Percussion Shifting dullness			
Auscultation			
Rectal examination			
Other examination done (specify)			
F. Genito-urinary System			
Costovertebral tenderness			
Genital/vaginal examination			
Other examination done(specify)			

G. Musculo-skeletal system			
Checking for oedema			
Other examination done(specify) :			
H. Central Nervous System			
Orientation			
Cranial nerves			
Sensation			
Motor Power Tone Reflex			
Meningial signs			
Other examination done (specify)			

Diagnosis

Investigation done (with results)

Treatment given

Any advice give

Annex XI. Performance Assessment Format

1. History

A. Good B. Fair C. Bad

2. Physical Examination

A. All pertinent p/Es done

B. Pertinent P/Es done but not complete

C. Pertinent P/Es not done

3. Diagnosis

Given the history and P/E (diagnosis-1 = D-1...)

a. D-1 ___ b. D-2 ___ c. D-3 ___ d. D-4 ___

A. Diagnosis is appropriate/consisten

B. Inconsistent

4. Investigations

For each investigation done, (Investigation-1 =I-1...)

a. I-1 ___ b. I-2 ___ C. I-3 ___ d. I-4 ___

e. I-5 ___ f. I-6 ___ g. I-7 ___

A. Necessary

B. Not necessary

C. Optional

5. Treatment

a. D-1 ___ b. D-2 ___ c. D-3 ___ d. D-4 ___

A. Treatment given is acceptable

B. Treatment given is not acceptable

6. Advice/follow up given

A. Advice given when necessary

B. Advice/follow up was necessary but not given

Annex XII

Patient Satisfaction Assessment Questionnarie For Private Clinics

Level of clinic_____

Interviewer _____

Date of interview _____

1. Sex of patient/ care taker (For children) ___

   Age of child __ Sex __

2. Age _____

3. Marrital Status

   Single ___ Married ___ Divorced ___ Separated ___

4. Educational Status

   Illiterate ___ Read and write only ___ 1-6 grade ___

   6-12 grade ___ 12+_____

5. Total family monthly income _____

6. Type of tenture

   Owned _____ Rented _____

7. Type of fuel used for cooking

   Fire wood _____ Kerosine _____

   Charcol _____ Electric city and Butagas __

8. Source of drinking water

   Owned tap _____ Other source (specify)_____

   Shared tap ____

9. Type of toilet facility

   Flush toilet _____ Pit latrine_____

   Other method (specify)_____

10. Household asset

    Private car_____ Refrigerator_____

    Television_____ Telephone_____

    Radio_____

1. How frequent do you use this clinic for your health care?

   1st visit __ occassionally __ Regular user __

2. Were you able to get to the health facility easily?

   Yes ___ No ___

   a. How long (minutes/hours) does it normally take you to get to the clinic?

      _____(min/hrs)

   b. By what means do you normally get to the clinic?

      Walking ___ Taxi ___ Private car ___

Annex XII

Patient Satisfaction Assessment Questionnarie For Private Clinics

Level of clinic_____

Interviewer _____

Date of interview _____

1. Sex of patient/ care taker (For children) ___

   Age of child __ Sex __

2. Age _____
3. Marrital Status

   Single ___ Married ___ Divorced ___ Separated ___
4. Educational Status

   Illiterate ___ Read and write only ___ 1-6 grade ___

   6-12 grade ___ 12+_____
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   Owned _____ Rented _____
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   Owned tap _____ Other source (specify)_____

   Shared tap ____
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   Flush toilet _____ Pit latrine_____

   Other method (specify)_____
10. Household asset

    Private car_____ Refrigerator_____

    Television_____ Telephone_____

    Radio_____

1. How frequent do you use this clinic for your health care?

   1st visit __ occassionally __ Regular user __
2. Were you able to get to the health facility easily?

   Yes ___ No ___

   a. How long (minutes/hours) does it normally take you to get to the clinic?

   _____(min/hrs)

   b. By what means do you normally get to the clinic?

   Walking ___ Taxi ___ Private car ___

3. How satisfied are you with the adequacy of the schedule (Working hours) of the health facility for your needs?

Very satisfied ___ Satisfied ___ Neutral ___ Dissatisfied ___ Very dissatisfied ___

4. After arriving at the health facility, how satisfied are you with the time spent waiting to be seen by a health worker?

Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___

a. About how long (min/hours) did you have to wait? ___

5. How satisfied are you with the time the health worker spent with you during your visit?

Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very dissatisfied ___

Facilities, equipments, and supplies

How satisfied are you with:

6. The overall cleanliness of the waiting area?

Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___.

7. The overall comfort of the waiting area?

Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___

8. The overall cleanliness of the examination room or place where you received service?

Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___

9. The cleanliness of any instrument or equipment used by the health workers to treat or examine you?

Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___

Availability of services

10. Were all the services you needed to treat your problem available at the health facility during your visit?

Yes ___ No ___

a. If not, please list any services which are not available at the clinic but are imortant to meet your needs?

_____

_____

Interpersonal qualities of service provider

How satisfied are you with:

11. The courtesy and respect offered by the provider during your visit?

Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___

12. The measures taken to assure privacy during your examination?
e.g., a private room, curtained or screened area, etc..?
Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___

Professional competence and skill of the health worker

13. How satisfied are you with the providers skills and ability in treating your problem?
Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___
14. How satisfied are you with the completeness of the information given to you about your problem?
Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___

Cost

15. How satisfied are you with the cost of services you received at the facility?
Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___

Satisfaction with resulting health status/Efficacy of treatment (If repeat visit)

16. How satisfied are you with the effectiveness of the services you received (In past visits) at the health center in solving your problem?
Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___
17. How satisfied are you in overall with the services you received from the health worker?
Very satisfied ___ Satisfied ___ Neutral ___ Disatisfied ___ Very disatisfied ___
18. Would you recommend the services at this health facility to someone else?
Yes ___ No ___

Declaration

I, the undersigned, declared that this thesis is my original work, has not been presented for a degree in this or any other university, and all sources of materials used for the thesis have been fully acknowledged.

Name: Senait Afework

Signature: _____

Place: Addis Ababa

Date of submission: December, 2000

This thesis has been submitted for examination with my approval as a university advisor.

Dr. Damen Haile Mariam
Advisor's name

_____
Signature