An enquiry in to hospital utilisation satistics and patient satisfaction:Exploratory study of karimnagar district hospital-Final report .

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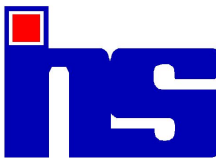

THE INSTITUTE OF HEALTH SYSTEMS

AN ENQUIRY INTO HOSPITAL UTILISATION STATISTICS: EXPLORATORY STUDY OF KARIMNAGAR DISTRICT HOSPITAL

I. Introduction

This study examines the data gathering and flowing process followed in a district Hospital (Karimnagar) which comes under the purview of Andhra Pradesh Vaidya Vidhana Parishad (APVVP) otherwise known as the Commissionerate of Medical Services[1]. The purpose of the study is to give suggestions which will help reorganise the Management Information System (M.I.S) of the hospitals under the commissionerate. The study makes a comparison of data routinely maintained on day to day basis at the hospital with the fortnightly statistics communicated by the hospital to APVVP headquarters in the prescribed format. The study focusses on hospital activity indicators and relevant quality related indicators as instructed by the commissionerate. Data for a period of six months from November 1st 1996 to 30th April 1997 is used for this purpose. In addition an attempt is made to develop quantitative indicators to capture some quality dimensions. For this purpose a team headed by a faculty member of the Institute of Health Systems (IHS) visited the Karimnagar District Hospital to collect relevant data.

II. Data Collection And Reporting System

A. Historical Background

The method of data compilation in the hospital has changed its course a few times in the last 10 years. During 1987-88, hospitals under APVVP continued to supply statistics on OPs (old and new), IPs (old and new), and operations (major and minor) following the practice of pre-APVVP days. During 1988 - 1994 a revised format was followed with additional information on discharges and death. With the setting up of a computer centre at the headquarters, collection of data to meet planning and other decision making requirements was initiated. Hospitals started receiving feedbacks on non reporting, delayed reporting and /or inconsistancy in reported data. The present reporting system was prescribed in 1995 and its inplementation in Karimnagar District Hospital started from December 1996. The latest modifications can be visualised from two angles:

[1] The APVVP was set up as an autonomous body in 1986.

1. **Stratification of Variables:** This include; separation of total death data into two categories i.e., post operative and other death , and spliting of major surgery data into tubectomy and other major surgeries.

2. **Addition of new variables:** The newly incorporated variables are; emergency IPs, emergency OPs, emergency major operations, emergency minor operations, deliveries, number of general lab tests, information on specific lab tests such as Electro Cardiograph (ECG), Ultrasonography (USG), X-Ray; postmortems and post operative infections.

More importantly, the new system is being pursued seriously by APVVP head quarters. This has brought in a sense of seriousness in recording data at the hospital level also.

B. Sources Of Hospital Data

Hospital data are available from Primary registers and Intermediate registers. Primary register is a record of the primary data directly collected from patients, their attendants or both. Intermediate register refers to information compiled in prescribed formats from the primary registers. Intermediate registers are maintained by the nursing superintendent. She receives information from wards and out patient departments (OPD) where primary registers are maintained.

1. Primary Data Registers

In primary registers identification parameters like name and registration number if any are entered along with details of event specific to each location. For example; name of the patients and their registration numbers are entered in admission registers, and registers maintained in each ward for inpatients. A separate register is maintained for OPs which contain name and registration number. In the operation theatre (OT) separate registers are maintained to record names and type of operation. Laboratory technicians maintain registers to record name of patient and type of test done. However, no unique identification (ID) is used by all stations reporting primary data. Details regarding primary data maintained at different stations in the hospital is given in Table 1.

2. Intermediate Registers

This register contains aggregated primary data on inpatients (IP) and outpatients (OP). The information included in this register (see Table 2) pertains to 24 hours i.e., from night 12 P.M. to next day night 12 P.M. It is worth mentioning that data on some

variables gathered in primary registers are not carried forward to intermediate registers. These include: (a) classification of cause of death into post operative and others; b) surgeries (including minor & major separately); (c) deliveries; (d) different type of lab tests (which includes general and specific lab tests such as ECG, USG & X-rays); (e) details about the emergency services and post mortems. For these variables, information were obtained from respective primary registers maintained in different wards.

In this scenario, if one wants to make a comparison between the hospital statistics sent to APVVP with that of the same statistics computed through direct collection of data from the hospital, then he/she has to depend on both the primary source (Primary register) and the secondary source (Intermediate register).

C. Limitations And Errors In The Hospital Data

1. Data Collected From Primary Register

Information regarding emergency patients were not maintained properly, except data on emergency IP and emergency operations. Emergency OP data were not at all gathered in the hospital. In principle, any patient before entering into the hospital has to enter his / her name in the OP register & take the registration slip. However, the OP register did not contain any information regarding the emergency hours and that there was no separate register at the OP counter for patients coming after regular duty hours. In response to our queries regarding this, the OP registration clerk explained that for some days the emergency hours are recorded from 2 P.M onwards (which should be recorded 12 O clock onwards since general OP counter closes at 12 P.M.) in OP registers and for some days the time of emergency hours was not entered in the register at all. The RMO and DMOs admitted that upon repeated requests of the patient's relatives they are compelled to prescribe medicines on a chit, even though the patients do not have any registration slip. Since no emergency OP register is available with DMOs, they were unable to keep record of the OP whom they give prescriptions. Therefore, distinguishing emergency OP cases from the general cases is a difficult task for them unless some alternative procedure is followed.

Even though information on emergency IP & Emergency operation were reported to be available in the hospital, we could not find out the registers on these two variables. Hence no comparison was possible for these two variables.

2. Data Collected From Intermediate Register:

Information on OPs, Admissions, discharges, deaths, cumulative IP days were collected from the intermediate register. Two errors were found from the data collected from intermediate register.

i. Missing Data: Observations on out patient data collected from the intermediate register were missing ocassionally. Total number of such days adds up to 15 during the six months period. New and repeated status of OPs was not reported on certain days. These adds up to 12 days during the period. This problem occured mostly for second saturdays and sundays as there is no general OP on holidays. According to DMOs, patients coming to hospital on these days are treated as emergency cases and therefore counted as emergency IP / emergency OP.

ii. Missing Variables: For three variables the data were missing. These are; emergency OP, emergency IP, and post operative infection. No alternative method could be found to correct these errors.

D. Accuracy Of Reported Data

The monthly statistics computed by the hospital for submission to APVVP was compared with that of the data collected by the IHS team. Note that the hospital provided statistics on a fortnightly basis to APVVP. Our objective here is to compare the monthly statistics for six months. For this purpose, we added the fortnightly figures supplied to APVVP and aggregated it monthly in order to get *APVVP monthly figures*. We obtained *our monthly figures* by aggregating day wise information collected from various registers. *Our monthly figures* are subtracted from the *APVVP monthly figures* (Appendix 1).

There are large scale discrepancies between the two sets of figures. There are instances of under reporting and over reporting of the APVVP figures compared to the IHS figures. Table -1 below summarises frequency of deviations in either direction (under reporting and over reporting). Most importantly frequency of correct reporting is very low. This means that the accuracy of data now collected by APVVP is suspect. The first step in building up a

management information system based on hospital activity indicators would be to ensure accuracy od data.

For convenience, we analyse the direction of deviations under the following heads.

1. Out patient data

The New OP data was consistently over reported except for the month of December. The net over reporting was 10048 cases (See Appendix Table 1). The range of deviation was between 0.27 - 33.93 per cent. Regarding the Old OP data, a reverse trend is visible. For four months, it was under reported. However, it also showed a net over reporting in the six months period to the tune of 7868 cases due to a very large over reporting for the month of February.

2. Inpatient data

Generally it is believed that the inpatient data in hospitals are properly accounted and are reliable. However, even under this category, there were gross under reporting and over reporting of data in the Karim Nagar district hospital. The number of admissions were under reported and over reported for three months each. The reasons for under/over reporting of admissions can be found only from an analysis of the ward data. A serious anomaly in the figures reported to APVVP was the consistent under reporting of the number of discharges. It is a serious problem in the sense that it indicates the neglect of admitted patients by the hospital. Discharge figures are very essential for the calculation of some of the important indicators of hospital performance. Similar is the case with the data on deaths which are under reported for three months and over reported for three months. No demarcation between post operative and other deaths was made in the intermediate register. It was found that there was very high under reporting in the month of April (65%). One generally expects no mistakes at least in this variable.

3. Surgeries

Major and minor surgeries were reported correctly for at least half the period. The range of deviations are also relatively lower in these cases.

4. Deliveries

The number of deliveries were consistently under reported. The reasons for this needs to be investigated.

5.Laboratory Tests

Regarding laboratory tests, there were instances of correct reporting even though over reporting and under reporting were present here too. It was due to the deliberate negligence on the part of the hospital statistician that the figures for the month of November were highly under reported (see Appendix Table 1). This is the reason why we get a very high upper limit for the range of deviations reported in these cases.

Table - 1 Deviation between reported and IHS figures from Karimnagar district hospital

Variables	Absolute range (%)	Direction			Remarks
		UR	OR	CR	
New OP	0.27 - 33.93	1	5	0	Over reporting
Old OP	0.79 - 51.30	4	2	0	
Admissions	0.09 - 7.90	3	3	0	Marginal deviations in both directions
Discharges	16.6 0 - 53.84	6	0	0	Consistently under reported
All deaths	1.64 - 65.0	3	3	0	Both under reporting and over reporting! Two months deviation is less than 5 %. For the rest four months, deviation is more than 10%.
Post opr. deaths	NA	NA	NA	NA	Data not gathered
Cumulative IP days	0.40 - 141.72	2	3	0 (NR= 1)	Data not available for November and massive under reporting inDec 1996. Both may be connected
Tubectomies	0.00 - 20.59	1	2	3	
Other major surgeries	0.00 - 27.70	1	4	1	Mainly over reporting
Minor	0.00 - 57.44	0	3	3	Mainly over reporting
Emergency OP	NA	NA	NA	NA	
Emergency IP	NA	NA	NA	NA	
Em Major Operations	NA#	NA#	NA#	NA#	
Em Minor Operations	NA#	NA#	NA#	NA#	
Deliveries	1.36 - 36.6	6	0	0	Consistently under reported
Lab tests	0.00 - 152.82	2	1	3	
USG	0.00 - 220.00	2	1	3	
X-ray	3.04 - 334.00	4	2	0	
ECG	0.79 - 177. 36	3	1	2	
Post mortem	4.34 - 41.1	2	4	0	
Post operative infections	NA	NA	NA	NA	

*	These are absolute deviations of APVVP figures expressed as percentage of our figures.
#	Comaparable figures are available only for the month of April
UR	Number of months for which the variable is under reported.
OR	Number of months for which the variable is over reported.
CR	Number of months for which the variable is correctly reported.
NR	Number of months for which the variable is not reported.
NA	Comparable figures not available.

E. Possible reasons for data error

There is no practice of computation of daily abstracts for the variables mentioned above. Nurses add up and compile abstracts after a fortnight, since the head quarters require data fortnightly. No specific instruction to compile aggregate numbers on a daily basis exists. This gives scope for errors, because a large number of entries for 15 days at a time have to be counted. Striking daily totals in the primary registers would reduce the scope of such errors As per the statement of the statistical assistant, data supplied from December to April were calculated correctly and sent fortnightly to A.P.V.V.P. But the statistics supplied in November contained errors. This was because of the negligence on the part of the hospital statistician in collecting the basic data from various registers and computing the final statistics. Three major reasons can be identified for the errors in data;

1. lack of adequate knowledge regarding the importance of maintaining hospital statistics.
2. shortage of staff for handling such a large quantum of information and
3. non computerisation at the first point of recording itself. Below a flow chart is given for a better understanding regarding the data errors which are likely to occur during the process of computation.

F. Scope for streamlining data generation process in hospitals

Given the present data maintenance system in the hospital and the clues got from the data reporting system we feel that the data generation process can be streamlined in two ways. One way is to compile day wise data and maintain intermediate registers on each and every variable. The data maintained in the primary registers should be cross checked with that of the data that would be maintained in intermediate registers periodically to ensure accuracy of data. Another way is to computerise the data collection at the first point itself so that there will not be any need for maintaining different registers at different points. The same computer can be linked to the APVVP headquarters through a modem. Using the file transfer protocol the data files can be transferred on line to the headquarters.

A sample format for streamlining the data collection process is given in Appendix 3. In this format we have suggested some additional variables on which data should be collected in order to enable the policy makers decide upon the additional number of indicators for evaluating performance of the hospitals. Additional points which have been suggested in the new format are: separation of data on different types of tests between IPs and OPs accompanied with the number of persons for whom the tests are done, information on the emergency services in detail, number of deliveries, demarcation of post mortem data between IP and referred, number of post operative infected cases, and separate information on post operative and other deaths.

II. Hospital activity indicators

Performance of a hospital can be best evaluated by examining the activity indicators. The hospital activity indicators are divided into four categories.

1. IP service activity indicators
2. OP service activity indicators
3. Causality service activity indicators
4. Medicolegal service activity indicators

The basic idea behind dividing the indicators among these four categories is to evaluate the hospital activity from these four dimensions. This will help understand the demand for the type of services to be rendered to the locality. On the basis of this, the facilities required by the hospital could be decided upon by the managers at headquarters. For example if the hospital concentrates more on IP services without setting apart atleast a small percentage of beds for casualities and medicolegal cases the provision of these two services will suffer. Thus, the performance indicators would throw useful insights into the provision of infrastructural requirements of the hospital.

A. IP service activity indicators

Indicators like number of OPs, IPs, discharges, deaths, cumulative IP days, Types of surgeries, number of deliveries etc. are the basic indicators of hospital performance.

Indicators like bed occupancy rate (BOR), turnover index (TI) and average length of stay (ALOS) play a vital role for managerial decision making on inpatient service provisions in the hospital. These indices are calculated using any two of the hospital censuses viz., number of beds, cumulative inpatient days and number of admissions. According to Mahapatra and

Berman (1993) "there is a circularity among these three indicators. Knowledge of any two can give an idea about the third". Furthermore, the authors state that the actual selection of two indicators which will give the information about the third "depend on the context of analysis. For managerial and administrative discussions turnover rate and bed occupancy rate may be appropriate". Once we have information about these two indicators, ALOS can be determined easily. However, the individual indicators showing inpatient service performance gives us a crude way of measuring hospital performance. A better understanding of the overall hospital performance is possible through the Combined Utilisation and Productivity (CUP) sector analysis (Pabon Lasso, 1987). The CUP analysis follows a simultaneous application of the three indicators - BOR, TI and ALOS. However, in explaining the performance of a single hospital, either the performance indicators in isolation or the CUP analysis cannot provide any meaningful results[1]. Therefore, we propose to apply these methods once the indicators for a larger sample of hospitals are obtained. For the present study, we are just reporting the values of the basic performance indicators without attempting a deeper analysis of it.

i. Bed capacity: "A Hospital bed is one regularly maintained and staffed for the accommodation and full time care of a succession of in patients, and is situated in wards or areas of the hospital in which continuous medical care for in patients is provided" (Davies and Macaulay, 1966). The total bed strength of the Karimnagar District hospital is 257.

ii. Admissions: Admission refers to the number of inpatients who are expected to stay in the hospital for atleast one night. As per this definition, the number of admissions in Karimnagar District Hospital during the study period was relatively low compared to the available beds. On an average there were only 30-34 admissions per day. See Table 2.

iii. Cumulative IP days: A single day of actual stay by a patient admitted to the hospital is called an inpatient day (IP) day. Monthly cumulative IP days are the total number of such days of stay cumulated monthwise. The cumulative IP days for this hospital varied between 5361 and 5753 for the all months under study, except for February[45].

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[1] This is because, for analytical purposes, we need to have certain benchmark figures. This is possible only if there are a sufficient sample of hospitals so that comaprisons can be made either with regard to the average hospital or the' best practice hospital'.

This leads us to conclude that there were a constant trend in cumulative IP days with little fluctuation in between the months. See Table 2.

iv. Bed Occupancy Rate[4]: The BOR in the hospital varied between 70% to 72% during the period under study. As it falls below the APVVP norm of 75%, it points to an under utilisation of available inpatient care facilities including beds.

v. Average Length of Stay (ALOS)[5]: ALOS is the mean number of days a patient stayed in the hospital from the day of admission to discharge. As per the norm of APVVP, ALOS should be around 8 days in a district hospital. In the Karimnagar District Hospital the ALOS varied between 5.23 days to 5.94 days during the study period. The monthly average of ALOS in the hospital is 5.49 days (see Table 2). In the health economics literature, a low ALOS is often attributed to a low illness severity which seems pertinent in this context. The reasons for patients with chronic diseases and with high illness severity not coming to the hospital needs further investigation. This should be studied against the adequacy of facilities in the hospital and the skill level of the doctors. Another reason for a low ALOS is the use of improved medical technology to diagnose faster. From this perspective, a lower ALOS is always admissible.

vi. Turnover Index [6]: The monthly average turnover index for the hospital is 3.88. This shows a moderately low turnover per bed for the hospital. The relatively low magnitude of the TI, along with a lesser ALOS, reiterates the presence of low bed occupancy and hence inefficient capacity utilisation in the hospital.

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3 In February, it was only 4957. However, if we account for additional two days by adding the average daily IP days, it would fall in the same range.

4 Bed Occupancy rate measures the percentage of total available beds that are occupied by the patients and is calculated by the formula: **BOR**= (Cumulative IP days for the specified period / (No of beds X period taken for study)) X100

5 ALOS = (Cumulative Inpatient days During Specified Period / Number of Admissions during the same period)

6 TI= (Admission during the referral period for the hospital under study referral period /number of beds available in the hospital referral period

Table - 2 Inpatient service activity indicators

Months	Bed Capacity	Cum. IP days	Admn.	TI	BOR	ALOS
November	257	5,558	1,011	3.93	72.09	5.5
December	257	5,753	968	3.77	72.21	5.94
January	257	5,435	1,013	3.94	68.22	5.37
February	257	4,957	946	3.68	68.89	5.24
March	257	5,741	1,097	4.27	72.06	5.23
April	257	5,361	953	3.71	69.53	5.63
Average	257	5,467.5	998	3.88	70.5	5.49

B. Inpatient clinical services

1. Number of surgeries

On an average 110 major surgeries are done in the hospital per month, i.e. nearly 4 surgeries per day. Given the facilities in the hospital, one cannot expect the hospital to accommodate more. Almost all surgeries which are possible to carry out in the hospital are done. It should be noted that the surgical cases accounted for 10.98% of total IP admissions.

Table - 3 IP service activity indicators

Months	Major Surgeries		Deliveries	
	Number	% of Admissions	Number	% of Admissions
November	131	12.96	74	7.31
December	107	11.05	83	8.57
January	89	8.78	82	8.09
February	103	10.88	66	6.98
March	125	11.39	65	5.93
April	103	10.81	73	7.66
Average	109.7	10.98	61.5	7.42

2. Number of deliveries

On an average, 61.5 deliveries were conducted in the hospital per month. It is only 7.42 % of admissions. This is because, due to cultural practices, people prefer home deliveries to institutional delivery. This pattern is present in the data for Andhra Pradesh as a whole where the attended deliveries are more and the institutional deliveries are only 17% (S.R.S. 1988). Again, most of the institutional delivery cases, particularly of the upper class are attended by the private hospitals where they expect to get better quality of care .

C. Comments and suggestions on IP service indicators

From the above analysis it is clear that the performance indicators of inpatient services in the Karimnagar District Hospital are not impressive. They appear to be below average when compared to hospitals of similar size and status (level). The factors behind this underutilisation of available inpatient care facilities needs explanation. This can be best elicited from the response of patients regarding facilities and quality of health care in the hospital. In this context, we report results from client satisfaction surveys undertaken by the IHS team in one of the forthcoming sections.

D. OP service activity indicators

1. OP consultation. new & repeated

In the case of OP consultation, on an average, daily there are 757 new and old out patients consultations.

2. OP per bed day (OPB)[1]

OPB is an indicator which captures the intensity of OP services provision which is an important component of hospital services. For the hospital, it ranges between 4.85 in January to 1.14 in March. The average OPB is only 2.91. This implies a relatively low outpatient service utilisation. Also, it points to a low potential for inpatient admissions which leads to a low occupancy rate (See Table 4).

Table -4 Outpatient service activity indicators

Months	OP consult. New	OP Consult. Rept	OP per Bed day
November	13,969	13,113	3.51
December	14,284	12,194	3.32
January	22,155	16,505	4.85
February	14,305	9,276	3.28
March	5,940	3,112	1.14
April	6,415	4,132	1.37
Average	12,844.67	9,722	2.91

E. Causality service activity indicators

1. Emergency OP ratio

[1] This is calculated as: OPB= ((OP consultation (New + Repeated) during the referral period)/ (No. of beds X Referral Period))

There is no basic data available for computation of any indicators regarding these services. As mentioned earlier, emergency IP & OP data, though available in the hospital, were not made available to us because of missing record books. This is the reason for which we could not obtain any indicators related to emergency services .

F. Medicolegal service activity indicators

1. Post mortems

Data was available for only one indicator i.e., number of post mortems, on medico legal service activity. As far as the number of post mortems are concerned it includes two things.

i. Post mortems of the patients died inside the hospital, and

ii. referred dead cases.

Out of the post mortems done during the study period 75% were referred cases. Inpatient post mortem constituted only 25%. However, we took total post mortems into consideration in order to find out its percentage out of total admissions. The percentage will automatically be high since dead patients from other hospitals referred to Karimnagar district hospital are more. This is evident from the average number of post mortems which is 44.83 per month. This would consume considerable amount of the staff time. (See Table 5).

Table 5 Medicolegal service activity and some of the quality indicators

	Post mortems		Post operative case fatality: total operations (%)	Hospital acquired infection: admissions(%)
Months	Number	% to Admissions		
November	32	3.17	0	0
December	40	4.13	0	0
January	40	3.95	0	0
Frebuary	46	4.86	0	0
March	64	5.83	0	0
April	47	4.93	0	0
Average	44.83	4.48	0	0

G. Common service indicators (for IPs and OPs)

1. Diagnostic service indicators

The number of Imaging & Electro-medical tests show an increasing trend . As mentioned earlier, the data for the month of November seems to be incorrect.

Looking at the figures for the other months, it is clear that the number of tests are increasing. Furthermore, the percentage of general laboratory tests to admissions exceeds 100%. This is due to the fact that a number of tests are conducted for IPs as well as OPs. Furthermore, multiple tests are done for a single patient. Given these facts, it is clear that the percentage of tests to admissions will exceed 100. This problem calls for data which should provide us information regarding the number of tests done for inpatients alone. If data is maintained on a per patient basis, we can arrive at accurate percentage figures and know the utilisation level of these services. See Table 6.

Table 6 Diagnostic services indicators

Months	No of Img. & ECM test	% of I m & EM tests to Admission	No of General Lab Tests	% of Lab test to Admn.
November	380	37.58	2,776	274.58
December	413	42.67	2,283	235.85
January	393	38.79	2,829	279.27
February	318	36.79	2,357	249.15
March	517	47.13	2,189	199.54
April	552	57.92	2,768	290.45
Average	428.83	43.48	2,533.67	254.81

IV. Quality of care

A. Measuring quality of care

Measurement of quality of care within the hospital by using different hospital activity indicators is a formidable task because of the variation in the type and intensity of care, equipment, personnel etc.,. Therefore, the instruments of evaluating quality of medical care in hospitals need not be as sensitive, valid, accurate and specific as one finds in firm level analysis of industries where the outcomes can be measured in terms of accountable unit. Due to this, direct measurement of medical care is difficult. What one can measure are, therefore, certain components or characteristics of it, in order to draw certain inferences and implications about quality (Sakharkar 1987).

Field experience and qualitative analysis do, however, suggest some likely hypotheses about the quality of care. Quality of care can be perceived from two angles - demand side factors and supply side factors. These factors need to be analysed in detail. Demand side factors

affecting the quality of care and ultimately the use of the hospital can be obtained from patient perception on the services provided. Supply side factors that interact with demand are; non monetary price of access, for example, the value of time spent in gaining access which is inversely related to the proximity of the hospital to patients in the catchment area, plus the availability and monetary cost of transport; and the quality of services with respect to the adequacy of drugs and other medical supplies, staffing, and the availability of critical specialities. These key factors need to be looked in detail which are important in affecting perceived quality. (Barnum and Kutzin, 1993). These points will be discussed in detail while analysing the survey results on client satisfaction.

In the following section, an attempt is made to develop certain indicators of quality and draw inferences and implications about the quality of care within the hospital under study.

B. Hospital statistics on quality of care

As mentioned above quality of care being a subjective concept, it is extremely difficult to measure it quantitatively. However, some indicators such as maternal death rate, Caesarean section rate, neo natal death rate, post operative death rate, hospital acquired infection rate etc could be used for getting some idea about the quality of care provided in the hospital. An attempt in this direction for the Karimnagar District Hospital was, however, constrained to a great extent by the non availability of data.

The number of cases getting infected is not reported for any of the wards. Due to this reason we could not compute the hospital acquired infection rate. However, information were available for computing caesarean section rate (CSR) [1] and Maternal Death Rate[2](MDR). The CSR is 15.87%. This is higher when one compares it with the figure (4-5 per cent) given by Sakharkar (1987). Even though there might have been cases which demanded caesarean section it is more probable that this hospital is also following the current trend of opting for more caesareans to normal deliveries. The MDR is also very high (4.76%) against the standard maximum of 0.25%. This should be a major cause for concern for the health sector administrators. The exit survey is expected to give a better picture about this also. We could not calculate the neonatal death rate because the data on deaths of new born babies was not

[1] CS Rate = [(Caesarean section performed during one month/ Total Births during the month) X100]

[2] Maternal Death Rate is the ratio of maternal deaths to obstetrical discharges.

vi. Data on diagnostic services is not maintained in detail on day to day basis. Therefore we suggest to maintain this data patient wise, indicating IP and OP separately, number and type of tests conducted on each patient.

D. Adhoc summary of hospital performance using available data:

i. Cumulative IP days show a constant trend varying between 5361 to 5753 per month except for the month of February where there is a large fluctuation.

ii. Number of new admissions remain between 946 to 1097 per month with fluctuations in every alternative months.

iii. On an average there were 757 (new as well as old) O.P consultations per day.

iv. Bed occupancy rate varies between 70% to 72% with little fluctuations in between.

v. Average length of stay remains almost constant for every month (i.e., varying between 5.23 days to 5.94 days).

vi. Out Patient per bed day varies between month to month lying between 3.28 to 4.85 with little fluctuation, except for the month of March and April when it was only 1.14 and 1.37.

vii. In clinical services such as surgical services the hospital shows better performance i.e., on an average 4 surgeries per day is done.

viii. Number of deliveries in the hospital is extremely low per month ranging between 55 for the month of March to 73 for the month of November.

ix. Number of emergency OP cases are coming down month by month except for the month of February when it was 2270 which was the highest figure.

x. Same is the case for emergency IP cases. It remained between 433 to 574 with little fluctuations in months.

xi. So far as the diagnostic services are concerned it shows better performance. On an average there is 379 electromedical and imaging tests and 2312 general laboratory tests. These high figures may be due to the reason that multiple tests may be done for the same patients.

xii. Number of inpatient post mortems is extremely low which implies that number o inpatient deaths are low for the hospital.

xiii. The caesarean section rate is extremely high when calculated for one month. It 15.87% for the hospital for that month.

xiv. Maternal death rate which was calculated for the month of April only is as high 4.76%.

xv. Gross death rate for the hospital is low i.e., 3.35%.

xvi. Autopsy rate for the inpatients died in the hospital is also as low as 2.09%.

VI. References

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Appendix table - 1

Comparison of reported data with data collected by IHS from primary & intermediate registers

MONTHS	OUTPATIENTS		INPATIENTS				Cum. IP Days	SURGERIES		
	NEW	OLD	Admn	Dischs.	Post operative Deaths	Other Deaths		Major		Minor
								Tubct.	Others	
NOVEMBER										
Reported	14,204	12,886	937	967	0	53	0	36	95	15
Collected by IHS	13,969	13,113	1,011	1,128	0	47	5,558	38	93	15
Discrepancy	235 (1.66)	-227 (-1.76)	-74 (-7.9)	-161 (-16.6)	0	6 (11.32)	-5,558	-2 (-5.55)	2 (2.10)	0 (0.00)
DECEMBER										
Reported	13,720	12,099	966	922	0	61	2,380	26	81	43
Collected by IHS	14,284	12,194	968	1,183	0	63	5,753	26	81	7
Discrepancy	-564 (-4.11)	-95 (-0.79)	-2 (-0.20)	-261 (-28.31)	0	-2 (-3.28)	-3373 (-141.72)	0 (0.00)	0 (0.00)	36 (83.72)
JANUARY										
Reported	22,214	16,325	982	905	0	61	5,457	27	79	23
Collected by IHS	22,155	16,505	1,013	1,247	0	60	5,435	25	64	23
Discrepancy	59 (0.27)	-180 (-1.10)	-31 (-3.16)	-342 (-37.8)	0	1 (1.64)	22 (0.40)	2 (7.40)	15 (18.98)	0 (0.00)
FEBRUARY										
Reported	18,996	15,394	958	889	0	47	4,743	40	79	47
Collected by IHS	14,305	9,276	946	1,244	0	55	5,957	40	63	20
Discrepancy	4691 (24.69)	6118 (39.74)	12 (1.25)	-355 (-39.93)	0	-8 (-3.76)	-1214 (-25.59)	0 (0.00)	16 (20.2)	27 (57.44)
MARCH										
Reported	8,991	6,390	1,098	975	0	57	5,786	52	101	10
Collected by IHS	5,940	3,112	1,097	1,500	0	65	5,714	52	73	10
Discrepancy	3051 (33.93)	3278 (51.3)	1 (0.09)	-525 (-53.84)	0	-8 (-14.04)	72 (1.24)	0 (0.00	28 (27.7)	0 (0.00)
APRIL										
Reported	8,991	3,106	954	910	0	38	5,904	34	68	29
Collected by IHS	6,415	4,132	953	1,224	0	63	5,361	27	76	20
Discrepancy	2576 (28.65)	-1026 (-33.03)	1 (0.1)	-314 (-34.5)	0	25 (65.0)	543 (9.2)	7 20.59)	-8 (-11.76)	9 (31.03)

Figures in parenthesis show the percentages.

Patient Perceptions on Quality of Care: Evidence from the Karimnagar District Hospital

Measurement of quality of health care using quantitative methods are formidable tasks because of the non quantifiable nature of the variables related to quality. However, alternative methods like patient satisfaction surveys would give us some insight regarding this aspect. In addition, certain questions like why patients surpass the lower level facilities and come to the higher ones is of immense importance to policy making. The answers to these and similar questions are addressed through an exit survey on inpatients as well as out patients. The exit survey was conducted during July 15th to July 26th, 1997. Below we present the methodology and sampling procedure of the survey in detail.

1 Methodology And Sampling

Exit surveys were conducted separately for inpatients and outpatients. In addition, a non-participant observation on 20 outpatients was undertaken to assess the reliability of results obtained by direct personal interview. For the inpatients too, a similar exercise was done. We visited each and every ward frequently, including night visits to observe the sequence of events and the real happenings inside the hospital. Results obtained from this exercise have been presented section 5 of this report.

1.1. Survey On Inpatients

A minimum of 100 inpatients were proposed to be covered in the exit survey. However, we did survey on a larger sample of 125 inpatients. Samples were chosen *on the basis of wards*. To allow for proportionality, 16 cases were selected from each ward. Patients were surveyed after they were discharged from the hospital. There were certain problems in getting adequate inpatients for interview. The problems faced in this regard are reported below.

As the duration of the survey was very short, it was extremely difficult to get 125 discharged cases from the hospital for interview. Even though, the average discharges per day in the hospital was 30[1], during the study period, there were very few discharges. Consequently, we could get only 40 discharged cases for the period, 15th June to 17th June. It was observed that the hospital kept these patients for care for a maximum of 4-5 days. In the light of this information, an alternate but feasible method was followed for selecting the

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[1] The data collected from intermediate registers gives an average discharge of 30 per day.

remaining 85 sample cases. ***The basic assumption on which the alternate method was based is that the patients who already stayed in the hospital for four days or more would be familiar with the hospital services and fairly good information could be collected from them regarding the inpatient care.*** For this purpose, the nurses of all the wards were requested to furnish information on patients who stayed for 4 days or more. Patients who stayed for a maximum number of days was interviewed first, followed by the next and so on... till the 16th case from the respective ward was covered.

Two precautions were taken while adopting this procedure.

- The survey was conducted by calling the patients and his attendants and filling up the questionnaires in the absence of any hospital staff.
- Utmost care was taken so that the respondent understood the questions perfectly and gave correct answer.

Investigators were selected from nearby localities of the hospital. Initially an in-house training was given to them and were asked to conduct a pilot survey. Some errors were found in this occasion. We trained them once again, particularly stressing the errors they committed during the pilot interview and then sent them to conduct the survey. Each and every investigator's form was checked at the end of the day immediately after they finished the work.

1.2 Survey On Outpatients

Outpatient samples were drawn from OP cases coming to the hospital. No gender classification could be made in the sampling procedure during data collection phase due to various constraints. The major reason was that the outpatients coming to the hospital were from various places and they tend to rush home immediately after consulting the doctor. Given this, a systematic random sampling by taking equal number of patients from each sex category was not possible. Therefore, a simple random sampling was followed.

2 Exit Survey On Inpatients

2.1 Prolife Of The Sample

As a prelude to the analysis, the following section elucidates the socio-economic profile of the sample.

2.1.1 Age And Sex

The inpatient sample consisted of 54 males and 71 females. Higher representation of females in the sample was due to a proportionately large number of female admissions in the hospital.

Table. I.1

Age And Sex Of The Respondents

Age Groups	Number of Respondents	Percentage to total	Population of Karimnagar District.#	Percentage to total
0- 9	6	4.8	699,314	23.02
10-14	15	12	358,301	11.8
15-19	10	8	298,359	9.82
20-24	14	11.2	266,681	8.78
25-29	29	23.2	255,598	8.41
30-34	15	12	207,370	6.83
35-39	5	4	193,070	6.36
40-44	12	9.6	165,360	5.44
45-49	4	3.2	134,287	4.42
50-54	5	4	136,896	4.51
55-59	0	0	73,265	2.41
60-64	3	2.4	103,870	3.42
65-69	0	0	47,774	1.57
70-74	5	4	48,381	1.59
75-79	1	0.8	16,180	0.53
80+	1	0.8	25,030	0.82
Total	**125**	**100**	**3,037,486**	**100**

Sex			
Male	**Female**	**Total**	
54 (43.2%)	71 (56.8%)	**125 (100%)**	

These figures are drawn from the 1991 census

The age group of 25-30 had a higher percentage (25.2%) of inpatients followed by 12 per cent in the group, 30- 35. A comparison of the percentage of inpatients falling under each group with that of the population of Karimnagar district[2] is useful. It is interesting to note that eventhough 23 per cent of the population are children in the age group of 0-9, only 4.8 per cent of them seek care from this hospital. The following are some of the possible explanations for this. a) Greater reliance on other systems of medicine such as Homeo; and b) Opting for private hospitals as parents look for qualilty care for their little ones. A reverse

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[2] We have taken the census population of Karimnagar district as the reference population. Except one, all the inpatients hailed from Karimnagar district. Out of this, Karimnagar town accounted for only 42 per cent, the rest being from the rural areas.

pattern is visible in the age groups 25-29 and 30-35. This may be due to a higher number of obstestrical cases in these groups.

2.1.2 Educational Status

More than half the inpatients were illiterates (illiterates include pre school children also). There were only 2 persons with higher education (post graduation/ professional course). Details on educational status are given in table 1.2.

Table 1.2
Educational Status Of The Respondents

Responses	No	%
Illiterate	64	51.2
Std I-IV	16	12.8
Std V-VII	23	18.4
Std VIII- X	12	9.6
Inter	5	4
Graduation	1	0.8
P.G/ Professional	2	1.6
Others	0	0
Not Applicable	2	1.6
Total	**125**	**100**

2.1.3 Occupation

Agricultural labourers and house wives represented more than half of the sample. They constituted 26.4 per cent each. Marginal peasants; unorganised sector labourers; household poultry, diaries, petty shops; skilled workers; were 4.8%, 4%, 3.2%, and 2.4% respectively. Twenty four per cent of the sample cases did not mention anything about their occupation. Elderly who did not mention their occupation and pre-school children are being classified as not applicable and constituted only 1.6% of the total sample. (Table 1.3)

Table 1.3
Occupation Of The Respondents

Occupational Classifications	No	%
Mazdoors (Agricultural labourers)	33	26.4
Unorganised sector labourers	5	4
Marginal peasants owning upto 2.5 acres of land	6	4.8
Village artisans	2	1.6
Unskilled industrial workers	2	1.6
Unorganised sector labour	0	0
Attendants	1	0.8
Skilled workers	3	2.4
Small peasants owning 2.6 to 5 acres	2	1.6
Household poultry, diaries, petty shops- upto Rs. 2500	4	3.2
White collar workers	2	1.6
Middle peasants owning 5.1 to 15 acres	0	0
Priestly class	0	0
Retail shops and other medium scale trade and industries	0	0
Rich peasants owning above 15 acres	0	0
Housewife	33	26.4
Not mentioned	30	24
Not applicable	2	1.6
Total	**125**	**100**

2.1.4 Economic Classification Based On Main Earner's Occupation

Occupation of the main earner of the family has been divided into four classes.

1. Lowest Class: Mazdoors/ Unorganised Sector Workers/ Marginal Farmers owning up to 2.5 acres of land, village artisans/ Unskilled Industrial workers.
2. Lower middle Class: Organised sector workers, attendants, skilled workers/ Labourer Small peasant owing from 2.6 to 5 acres of land, household poultry, pretty shops.
3. Middle Class: White collar workers/ Middle peasant owning 5.1 to 15 acres of land, priestly class, retail shops and other medium scale trade and industry.
4. Rich: Peasants owning above 15.1 acres of land/ diaries, poultry large scale industrialists/ large scale traders/ Professionals.

Based on these categories, the economic class of the respondents have been identified. Thus. 56.8 per cent of the respondents belong to the lower class. 32.8 per cent belong to lower middle and 8.8 per cent belong to the middle class. None of the respondents were from

the rich class. This leads us to conclude that the inpatient services of the hospital were mostly used by the poor - lower and lower middle class people (see table 1.4).

Table 1.4

Economic Classification Of The Respondents Based On Main Earner's Occupation

Classes	No	%
Lowest Class	71	56.8
Lower Middle Class	41	32.8
Middle Class	11	8.8
Rich	0	0
Not Mentioned	2	1.6
Total	**125**	**100**

2.1.5 Economic Classification Based On Actual Income

More than 26 per cent of the patients had a monthly family income less than Rs.500. A substantial portion of the sample (55.2 %) reported their income between Rs.501-1500 per month. No one had an income above Rs 10,000 per month. To conclude, the users of the hospital were economically backward as seen already in the economic classification (see Table 1.5).

Table 1.5

Total Income Of The Family In Absolute Terms

Responses	No	%
Less than Rs. 500	33	26.4
Rs. 501- 1500	69	55.2
Rs. 1501-3000	20	16
Rs. 3001-5000	2	1.6
Rs. 5001- 10,000	1	0.8
Rs. 10,001 and above	0	0
Total	**125**	**100**

The above analysis provides a clear picture regarding the socio-economic background of patients seeking care in public hospitals. The broad trend which is evident from the analysis is that it is mostly the poor people who approach the government facilities. This is because they cannot afford paid services. Hence they seek care in the government hospitals where services are free. More insights into this and related issues are attempted in the forthcoming sections on the analysis of the survey data.

3. Results From The Survey On Inpatients

3.1 Reasons For Surpassing Lower Level Facilities

When the inpatients were asked as to whether they attended the hospital which is nearby their locality before coming to this hospital, 65.6 per cent of them responded 'No' where as 32.8 per cent attended the nearby facility. See table 1.6.

Table 1.6

Whether Attended Nearby Hospital Or Not Before Coming To This Hospital

Responses	No	%
Yes	41	32.8
No	82	65.6
Not Mentioned	2	1.6
Total	**125**	**100**

Multiple responses were obtained regarding the reasons for approaching this hospital by surpassing the nearer one. The total number of responses, therefore, were not equal to the number of patients surveyed.

Seventy six cases preferred this hospital due to the higher charges in private hospitals. This substantiates the earlier findings from the socio-economic profile of the patients. In addition, it suggestd that the nearest hospitals are private. This could be by chance or due to poor spread of government hospitals in the area. Better facilities in this hospital compared to the nearby hospitals compelled sixty nine patients to seek medication here. For details see Table 1.7.

Table 1.7

Reasons For Coming To This Hospital

Reasons	No
Hospital is Nearby	34
Convenient Hospital Timings	9
Availability of Doctors	39
Good Hospital Facility	69
Has Facilities for Emergency Treatment	23
Difficult to Afford Private Hospital	76
Others if any	4
Total	**254**

Table 1.8

Reasons For Not Utilising Lower Level Facility

Reasons	No
Doctors are not always available	15
No specialist doctors to treat me	35
No convenient hospital timing	3
No proper diagnosis facility	36
My case was severe	33
Others if any	8
Total	**130**

Multiple responses were obtained for not attending lower level facility. The major factors cited were the lack of proper diagnostic facility, the non-availability of specialists and the patient perception that his/her ailment was severe and that it could not be handled by the nearby hospital. (See Table. 1.8).

3.2. Waiting Time At Different Places Of Service Delivery

3.2.1. Registration Counter

As one would expect, waiting time at the registration counter was the least compared to the other points of service delivery. The average time for a patient was only 9 minutes. Forty four per cent of the patients had to wait for only 0-4 minutes. Longer waiting time (more than 45 minutes) was reported only for 2.4 per cent of the patients. Details regarding this are given in the second and third columns of table 1.9.

3.2.2 Meeting The Doctor

Nearly 70 per cent of the patients could meet the doctor within fifteen minutes and 25.6 per cent had to wait for 15- 30 minutes. The average time taken in this case was 15 minutes. (See table 1.9, columns 4 & 5).

3.2.3 Admission Procedure

The following feedback were obtained regarding the duration of admission procedure[3]. Around 38 per cent of the respondents were found to wait 10-14 minutes in order to finish the admission procedure. Compared to the earlier cases, a higher proportion of patients were waiting for more than fifteen minutes for completing the admission procedure. For three

[3] This applies to admissions made during both regular hours and emergency hours.

cases, it took for more than two hours for completing the same. The average waiting time (24 minutes) was thus relatively high.

Reasons for waiting longer depends on the procedures involved before admission. For admissions during regular duty hours, it takes only a few minutes. But for the cases coming after regular duty hours it takes more time as the pre-admission procedures such as diagnosis takes more time. In this context, the general practice of the hospital is worth mentioning. The doctors stay outside the hospital campus. Same is the case with lab technicians. When an emergency case comes, the Duty Medical Officer calls the lab technician, and if necessary, the specialists concerned, and send vehicles to bring them from their residence. This takes quite a lot of time; consequently, the patient has to wait for a long time.

3.2.4 Initial Treatment

Unless the case is emergency, initial treatment of the patient starts only after doctor's visit to the ward. Therefore, the initiation of medication for those admitted in the regular duty hours takes more time compared to the admissions in emergency hours. However, for cases with severe complexities, the patients admitted even during regular hours are given immediate initial treatment. Table 1.9 shows that, 39.2 per cent of the inpatients had to wait for a maximum of 10 - 14 minutes for their initial treatment, 33.6 per cent had to wait for 15 - 30 minutes and 12 per cent had to wait for 5 - 9 minutes registering an average waiting time of 22 minutes.

3.2.5. Specific Treatment After Diagnosis

Most of the patients underwent diagnostic procedures. Only 8 per cent of the patients did not undergo any specific diagnostic procedure. Among those underwent diagnostic procedures, 36.8 per cent had to wait for 10 -14 minutes for the specific treatment. The same number of respondents waited for 15 - 30 minutes for the treatment. There are cases (3.2 per cent) of waiting more than 2 hours for the same. Consequently, the highest average waiting time (26 minutes) was reported for this. However, it is to be noted that time taken for treatment procedure to be started depends on the availability of specialists. Any delay in the rounds by the doctor would obviously result in a longer time for the specific treatment to be started. See table 1.9.

Table 1.9

Waiting Time At Different Points Of Service Delivery

Time (in Minutes)	Registration Counter		Meeting the doctor		Admission procedure		Immediate initial treatment		Specific treatment after diagnosis	
	No.	%	No.	%	No.	%	No.	%	No.	%
0-4	55	44	2	1.6	2	1.6	2	1.6	1	0.8
5-9	25	20	52	41.6	15	12	15	12	2	1.6
10-14	27	21.6	30	24	48	38.4	49	39.2	46	36.8
15-30	13	10.4	32	25.6	39	31.2	42	33.6	46	36.8
31-45	2	1.6	2	1.6	5	4	2	1.6	3	2.4
46-60	3	2.4	5	4	10	8	9	7.2	9	7.2
61-120	0	0	0	0	2	1.6	1	0.8	2	1.6
121 and above	0	0	0	0	4	3.2	3	2.4	4	3.2
Not Applicable	0	0	0	0	0	0	0	0	10	8
Not Mentioned	0	0	2	1.6	0	0	2	1.6	2	1.6
Total	**125**	**100**	**125**	**100**	**125**	**100**	**125**	**100**	**125**	**100**

3.3. Specific Information Regarding Operations

No detailed information pertaining to surgery could be obtained from the hospital statistics. Therefore, during the exit survey, we tried to gather some information related to this. Information on time taken for operation, post operative deaths as well as deaths inside the operation theatre were gathered for drawing some insights regarding the surgical activities of the hospital.

3.3.1 Time Taken For Operation

Out of 50 cases for whom surgery was done, 17 (13.6%) responded that the duration of the surgery was 61 -75 minutes. Fifteen of them reported that it took only 15 - 30 minutes. Only for one case, the duration of the operation was more than 2 hours. For details see table 1.10.

All cases got operated in the hospital mentioned that the time told by them included pre operational procedure such as change of dress etc.,.

Table 1.10
Time Taken For Operation

Minutes	No	%
15-30	15	12
31-45	0	0
46-60	11	8.8
61-75	17	13.6
76-100	3	2.4
101-125	3	2.4
126 and above	1	0.8
Not Applicable	75	60
Total	**125**	**100**

3.3.2 Mortality In The Operation Theatre

There was no incidence of death inside the operation theatre during the study period. Results from the sample shows that the inpatients have not witnessed any incidence of death in the operation theatre. See table (1.11).

Table 1.11
Mortality In The Operation Theatre

Responses	No	%
Yes	0	0
No	71	56.8
Don't Know	36	28.8
Not Mentioned	18	14.4
Total	**125**	**100**

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Table 1.10
Time Taken For Operation

Minutes	No	%
15-30	15	12
31-45	0	0
46-60	11	8.8
61-75	17	13.6
76-100	3	2.4
101-125	3	2.4
126 and above	1	0.8
Not Applicable	75	60
Total	**125**	**100**

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Not Mentioned	18	14.4
Total	**125**	**100**

As many as 40 per cent of the patients informed that the overall behaviour of the staff was not very cordial. In contrast, 32 per cent of them opined that the behaviour was very cordial, and 19.2 per cent described it to be just cordial. Seven patients (5.6%) even complained that the behaviour of staff was not at all cordial. See table 1.13.

In order to get information on the behaviour of various categories of staff separately, the respondents were asked to describe it categorically. Results obtained from this exercise is given below.

Table 1.13
Patient Satisfaction On Overall Behaviour Of The Staff

Responses	No	%
Extremely Cordial	3	2.4
Very Cordial	40	32
Not very Cordial	50	40
Just Cordial	24	19.2
Not at all Cordial	7	5.6
Don't Know	0	0
Not Mentioned	1	0.8
Total	**125**	**100**

3.5.2 Doctors

A majority of patients (64.8%) expressed that the behaviour of the doctors was good. See table 1.14.

3.5.3 Nurses

As far as the services of nurses are concerned, 63.2 per cent of the inpatients perceived it as 'Fair'. Only 20 per cent treated it as 'Good' and 3.2 per cent as excellent. See Table 1.14.

3.5.4 Other Supportive Staff

Fifty one (40.8%) of the total sample felt the behaviour of this section of the staff as only fair and a mere 32 per cent treated it as good. Rest of the sample 18.4 per cent and 5.6 per cent reported that the behaviour of other supportive staff were average and below average respectively. For details see table 1.14.

Table 1.14
Patient Satisfaction Regarding Services Rendered By Different Staff

Responses	Doctors		Nurses		Other Supportive Staff	
	No	%	No	%	No	%
Excellent	2	1.6	4	3.2	3	2.4
Good	81	64.8	25	20	40	32
Fair	26	20.8	79	63.2	51	40.8
Average	14	11.2	15	12	23	18.4
Below Average	2	1.6	1	0.8	7	5.6
Not Mentioned	0	0	1	0.8	1	0.8
Total	**125**	**100**	**125**	**100**	**125**	**100**

3.6. Patient Satisfaction Regarding Other Services

Information about satisfaction on drugs, medical equipment, surgical equipment, ventilation, bedding and food were collected. Details regarding the responses obtained on these services are given below.

3.6.1 Drugs

As high as 62.4 per cent of the respondents were of the view that the drugs provided in the hospital are good and 29.6 per cent treated it as fair. For details see table 1.15.

3.6.2 Medical Equipment

Majority of patients (54.4%) considered that the medical equipment are just fair and 20.8 per cent were of the view that the equipment were under good condition. See table 1.15.

3.6.3 Food

Regarding food, none of the informants felt that it was excellent. Sixty three patients were of the opinion that food was fair. Responses like food was good, average, and below average were expressed by 33 (26.4%), 15 (12%), 11 (8.8%) inpatients. See table 1.15.

The the above aspects of patient satisfaction should be looked into with care because the patients were surveyed within the hospital. There is a chance of false or neutral answers on questions asked to them for fear of denial of a facility in case of a negative answer.

Table 1.15
Patient Satisfaction on Other Services

Responses	Drugs		Medical Equipment		Surgical Equipment		Ventilation		Bedding		Food		Cleanliness of ward	
	No	%	No	%	No.	%	No	%	No	%	No	%	No	%
Excellent	1	0.8	3	2.4	2	1.6	21	16.8	6	4.8	0	0	3	2.4
Good	78	62.4	26	20.8	12	9.6	86	68.8	73	58.4	33	26.4	72	57.6
Fair	37	29.6	68	54.4	33	26.4	12	9.6	38	30.4	63	50.4	36	28.8
Average	7	5.6	6	4.8	5	4	6	4.8	5	4	15	12	12	9.6
Below	2	1.6	0	0	0	0	0	0	1	0.8	11	8.8	2	1.6
Don't	0	0	21	16.8	71	56.8	0	0	0	0	3	2.4	0	0
Not	0	0	1	0.8	2	1.6	0	0	2	1.6	0	0	0	0
Not	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**125**	**100**	**125**	**100**	**125**	**100**	**125**	**100**	**125**	**100**	**125**	**100**	**125**	**100**

3.7 Hospital Cleanliness Rating

3.7.1 Changing Bed Sheets

Fifty six (44.8%) of patients told that the bed sheets were changed daily, 55 (44%) were of opinion that those were changed once in 2 days. Only 11 (8.8%) responded that bed sheets were changed twice a week. See table 1.16.

3.7.2 Cleaning Floors

Most of the respondents (81.6%) reported that the floors are cleaned daily with phenyl water. Only 17 (13.6%) patients responded that the floors are cleaned once in 2 days. These responses correlates with our observation on the cleanliness of floors. See table 1.16.

3.7.3 Cleaning Toilets

"Toilets are cleaned daily" was the answer given by 59.2 per cent of the respondents. Thirty nine (31.2%) of the patients were of the opinion that toilets are cleaned once in 2 days. Only 7 (5.6%) of the patients responded that it is cleaned twice a week. See table 1.16

Certain points need to be noted here. Most patients going to the toilets rarely clean it by themselves. Even their attendants do not take care of this. As per our observation all lavatories are cleaned at least once a day. (Table 1.16).

Table 1.16
Hospital Cleanliness Rating

Responses	Frequency of changing bedsheets		Frequency of cleaning floors		Frequency of cleaning toilets	
	No	%	No	%	No	%
Daily	56	44.8	102	81.6	74	59.2
Once in two days	55	44	17	13.6	39	31.2
Twice a Week	11	8.8	5	4	7	5.6
Weekly	0	0	0	0	0	0
Not even weekly	0	0	0	0	0	0
Don't Know	0	0	0	0	5	4
Not Mentioned	3	2.4	1	0.8	0	0
Total	**125**	**100**	**125**	**100**	**125**	**100**

3.7.4 Availability Of Dustbins And Spittoons

Responses that insufficient dustbins and spittoons are provided in the hospital constituted the highest. This was expressed by of 70.4 per cent of the patients. One fourth of the patients responded that the dustbins were sufficient. (Table 1.17)

Table 1.17
Availability Of Dustbins And Spittoons

Responses	No	%
Sufficient	32	25.6
Not sufficient	88	70.4
Don't Know	5	4
Not Mentioned	0	0
Total	**125**	**100**

3.7.5 Cleanliness Of Lab

Most of the respondents (84%) expressed satisfaction regarding this. Only 9.6 per cent of the sample were not satisfied with the cleanliness of the laboratory. (Table 1.18).

Table 1.18
Cleanliness Of The Laboratory

Responses	No	%
Yes	105	84
No	12	9.6
Don't Know	7	5.6
Not Mentioned	1	0.8
Total	**125**	**100**

3.7.6 Cleanliness Of Dressing Room

"Very Clean" was the highest number of response (65.5%) obtained from the sample. Only 1.6 per cent of the respondents expressed that dressing rooms were not clean. See table 1.19.

Table. 1.19
Cleanliness Of Dressing Rooms

Responses	No	%
Extremely clean	4	3.2
Very clean	82	65.6
Clean	18	14.4
Not so clean	1	0.8
Not at all clean	1	0.8
Don't Know	11	8.8
Not Mentioned	8	6.4
Total	**125**	**100**

3.8 Perceptions Regarding Other Services

3.8.1 Water Supply

Regarding the availability of water in the hospital, two-third of the sample considered it quite adequate, 16.8 per cent considered it immensely available and 8 per cent felt it adequate. On the other hand, water is not adequate enough, and not at all adequate, was expressed by 11 respondents (see table 1.20).

It should be noted that these observations relate only to the availability of water for cleaning, washing and toiletary purposes. In this context we would like to place our observation on the availability of drinking water in the hospital. Water supplied to the hospital is not suitable for drinking purpose. Therefore, the attendants of the patients admitted in the hospital had to collect water from the bore wells for the purpose of drinking.

Table 1.20
Availability Of Water Supply And Electricity

Responses	Water supply in the hospital		Electricity in the hospital	
	No	%	No	%
Immensely available	21	16.8	35	28
Quite adequate	83	66.4	77	61.6
Adequate	10	8	9	7.2
Not adequate enough	8	6.4	2	1.6
Not at all adequate	3	2.4	2	1.6
Don't Know	0	0	0	0
Not Mentioned	0	0	0	0
Total	**125**	**100**	**125**	**100**

3.8.2 Generator Power Supply

Ninety three (74.4%) of the respondents were aware of the availability of generator power supply in the hospital, where as 31 respondents were ignorant about it. As per our observation, the hospital had two generators, out of which one was not functioning. See table 1.21.

Table 1.21
Availability Of Generator Power Supply

Responses	No	%
Yes	93	74.4
No	13	10.4
Don't Know	18	14.4
Not Mentioned	1	0.8
Total	**125**	**100**

3.8.3 Time Taken For Generator Power To Be Supplied

Regarding the time taken for power supply in case of electricity failure, 32 per cent reported that it took only 15 minutes for the generator power to be supplied. An equal number of respondents reported that it took 30 minutes for the same. Forty one (32.8%) of the respondents expressed their ignorance about generator power supply. See table 1.22.

Table 1.22

Time Taken For Generator Power Supply

Responses	No	%
Within 15 Minutes	40	32
Within 30 Minutes	40	32
Within one hour	2	1.6
After one hour	0	0
Don't Know	28	22.4
Not Applicable	13	10.4
Not Mentioned	2	1.6
Total	**125**	**100**

3.8.4 Use Of Sterilised Needles

Except three cases, all respondents were of the opinion that sterilised needles are used for giving injections. See table 1.23. However, a major concern expressed by many of the staff nurses was that the sterilizer provided to them in wards becomes non functional very frequently. Therefore, they had to use non-sterilised needles for injections. During our study period there were four AIDS patients in the hospital (this information was collected confidentially). Given this, almost all the nurses urged the necessity of a Central Sterilisation Department which existed previously but was removed some time back.

Table 1.23

Use Of Sterilised Needles For Giving Injection Or Not

Responses	No	%
Yes	122	97.6
No	2	1.6
Not Mentioned	1	0.8
Total	**125**	**100**

3.8.5 Use Of Disposable Needles

A sizeable portion of the patients (64%) believed that disposable needles are used for taking blood from the donors. For details, see table 1.24. Given the prevalence of AIDS, use of disposable needles are very essential. Therefore, we recommend to use it compulsorily for all injections.

Table 1.24

Use Of Disposable Needles Used For Taking The Blood

Responses	No	%
Yes	80	64
No	1	0.8
Don't Know	10	8
Not Applicable	32	25.6
Not Mentioned	2	1.6
Total	**125**	**100**

Similarly, for giving blood to patients, according to 66.4 per cent of the samp disposable needles are used. However, 35 (28%) patients reported that disposable need are not used. See Table 1.25.

Table 1.25

Use Of Disposable Needless For Giving Blood To The Patient

Responses	No	%
Yes	83	66.4
No	35	28
Not Mentioned	7	5.6
Total	**125**	**100**

3.8.6 Recommending The Hospital To Others

In order to get some idea regarding patient satisfaction on overall hospital services, patients were asked to express their opinion on recommending this hospital to other patie As high as 96.8% of the patients responded that they would suggest others to seek care in t hospital. See table 1.26.

Table 1.26

Opinion On Recommending The Hospital To Others

Responses	No	%
Yes	121	96.8
No	3	2.4
Don't Know	0	0
Not Mentioned	1	0.8
Total	**125**	**100**

3.8.7 Reasons For Recommending The Hospital

The hospital being under government ownership and that services provided are free cost are reasons for 43.2 per cent of the patients to recommend it for others. Approximat 26 per cent would recommend for the good services of the doctors and 17.6 per cent wo do so for the good nursing care. For details see Table 1.27.

It is interesting to note that these results are comparable with the patient perceptions on these aspects discussed elsewhere.

Table 1.27
Reasons For Recommendation

Responses	No	%
Good facilities	9	7.2
Good doctors services	32	25.6
Good Nursing Care	22	17.6
Govt. Hospital nature	54	43.2
Other reasons	0	0
Don't Know	0	0
Not Applicable	0	0
Not Mentioned	8	6.4
Total	**125**	**100**

3.8.8 Attendant's And Visitor's Satisfaction

Patients generally felt that their attendants and visitors are satisfied with the services provided in the hospital. See table 1.28 & 1.29.

Table 1.28
Attendants' Satisfaction With The Services Of The Hospital

Responses	No	%
Yes	119	95.2
No	5	4
Don't Know	1	0.8
Not Mentioned	0	0
Total	**125**	**100**

Table 1.29
Visitor's Satisfaction With The Services Of The Hospital

Responses	No	%
Yes	115	92
No	9	7.2
Don't Know	1	0.8
Not Mentioned	0	0
Total	**125**	**100**

4 Results Of The Exit Survey On Outpatients

4.1 Socio- Economic Profile Of The Sample

4.1.1 Age And Sex

There were more number of males .i.e., 72 (57.6%) than females 53 (42.9%) in the sample. Among the age groups, 35-39 had the largest share (15.2%). As already seen in the

case of inpatient age composition, the percentage of children in the age group 0-9 are is only 1.6 % as against their share of 23 per cent in the population. It is worth noting that a relatively higher percentage of old people and people between 25 and 44 approach the hospital.

Table 2.1
Age And Sex Of The Respondents

Age Groups	Number of respondents	%	Population of Karimnagar District #	%
0-9	2	1.6	699,314	23.08
10-14	8	6.4	358,301	11.83
15-19	3	2.4	298,359	9.85
20-24	11	8.8	266,681	8.8
25-29	12	9.6	255,598	8.44
30-34	9	7.2	207,370	6.84
35-39	19	15.2	193,070	6.37
40-44	14	11.2	165,360	5.46
45-49	4	3.2	134,287	4.43
50-54	8	6.4	136,896	4.52
55-59	4	3.2	73,265	2.42
60-64	20	16	103,870	3.43
65-69	3	2.4	47,774	1.58
70-74	3	2.4	48,381	1.6
75-79	0	0	16,180	0.53
80+	5	4	25,030	0.83
Total	**125**	**100**	**3,029,736**	**100**
Sex				
Male	**Female**			
72 (57.6%)	53 (42.4%)			

These are drawn from the 1991 census figures.

4.1.2 Education

As high as 60.8 per cent of the respondents were illiterates. Eighteen (14.4%) had education between Std V - VII and 13 (10.4%) had between Std VII - X. Only 7 respondents completed their intermediate and 2 completed their graduation. (Table 2.2)

Table 2.2
Educational Status Of The Respondents

Responses	No	%
Illiterate	76	60.8
Std I-IV	9	7.2
Std V-VII	18	14.4
Std VIII- X	13	10.4
Inter	7	5.6
Graduation	2	1.6
P.G/ Professional	0	0
Others	0	0
Not Applicable	0	0
Total	**125**	**100**

4.1.3 Occupation

Agricultural labourers constituted 27.2 per cent of the sample. Nearly 15 per cent were housewives, 8.8 per cent skilled workers, 7.2 per cent unorganised labourers, and 4.8 per cent village artisans. Respondents who are very old or pre school children are coded as not applicable. This portion of the sample constituted 16.8 per cent of the total. For details about occupation, see table 2.3.

Table 2.3
Occupation Of The Respondents

Occupation	No	%
Mazdoors (Agricultural Labourers)	34	27.2
Unorganised Sector Labourers	9	7.2
Marginal Peasants Owning up to 2.5 Acres land	5	4
Village Artisans	6	4.8
Unskilled Industrial Workers	0	0
Organised Sector Labour	3	2.4
Attendants	5	4
Skilled Workers	11	8.8
Small Peasants owning 2.6 to 5 Acres	6	4.8
Household Poultry, Dairies, Petty shops- up to Rs. 2500	5	4
White collar workers	1	0.8
Middle Peasants Owning 5.1 Acres to 15 Acres	1	0.8
Priestly Class	0	0
Retail Shops and Other Medium Scale Trade and Industries	0	0
Rich Peasants above 15.1 Acres	0	0
Housewife	18	14.4
Not Mentioned	0	0
Not Applicable	21	16.8
Total	**125**	**100**

4.1.4 Economic Classification Based On Main Earner's Income

Out of 125 out patients interviewed, a major chunk 48.8 per cent were from the lo middle class followed by the lowest class who represented 44.8 per cent of the sample. C 6.4 per cent were from the middle class and none belonged to the upper class. These figu are in tandem with the corresponding figures obtained from the inpatient sample. See ta 2.4.

Table 2.4
Economic Classification Of Outpatients Based On Main Earner's Occupation

Classes	No	%
Lowest Class	56	44.8
Lower Middle Class	61	48.8
Middle Class	8	6.4
Rich	0	0
Total	**125**	**100**

4.1.5 Economic Classification Based On Monthly Family Income

When we divided total sample among different economic classes by taking total inco of the respondents' family into consideration, a major chunk 73.6 per cent had a mont family income between Rs.500 - 1500 and 14.4 per cent had an income less than Rs.500/- month. These two income groups represent lower middle class and poor respectively. N of the respondent's family income exceeded Rs.5000.

Table 2.5
Economic Status Based On Total Income Of The Family

Family Income	No	%
Less than Rs. 500	18	14.4
Rs. 501- 1500	92	73.6
Rs. 1501-3000	14	11.2
Rs. 3001-5000	1	0.8
Rs. 5001- 10,000	0	0
Rs. 10,001 and above	0	0
Total	**125**	**100**

4.2 Outpatient Waiting Time At Different Points Of Service Delivery

4.2.1 Registration Counter:

A little over 90 per cent of outpatients had to wait for only less than fifteen minute registration counter. The average waiting time was only 7.85 minutes[5]. See Table 2.6.

[5] This is very close to the average inpatient waiting time of 9 minutes.

4.2.2 Consulting The Doctor

Forty seven (37.6%) respondents had to wait 5-9 minutes for meeting the doctor. Thirty one i.e., 24.8% answered that they had to wait 15 - 30 minutes and 30 (24%) of respondents had to wait 10 - 14 minutes for the same. The average waiting time is estimated to be 12.84 minutes which is close to the 15 minutes reported for inpatients. See Table 2.6.

4.2.3 Diagnostic Report

As high as 94 (75.2%) of the respondents informed that no diagnosis was suggested to them by the doctor. These responses are classified as not applicable. Out of the other 31 who were suggested, 54.84 per cent reported that they had to wait 15 - 30 minutes for their report. Eight (25.81%) had to wait 46 - 60 minutes and only 4 (12.90%) informed that time taken for their diagnosis report was 31 - 45 minutes. The average waiting time in this case was 33.86 minutes which is much higher than that it took for the other two points of service delivery.

In this context, the regular practice of the hospital need to be mentioned. For the diagnostic report of OPs, the lab technician takes minimum of one day and ask the patients to come on the next day. Therefore the responses that we obtained above only include the waiting time for getting the diagnostic report. It excludes the total time taken for collection of sample and conducting test.

4.2.4 Pharmacy

Waiting time at pharmacy ranged between less than a minute to a maximum of 30 minutes. The average waiting time was 9 minutes. Fourty per cent of the respondents waited only 0-4 minutes for getting medicine. Twenty nine (23.2%) were of the opinion that they had to wait 10-14 minutes, & 25 (20%) responded that they waited for 15-30 minutes at the counter. The major reason for waiting more than 15 minutes was due to long queue for getting the medicines. (Table 2.6).

Table 2.6

Waiting Time At Different Points Of Service Delivery

Responses (In Minutes)	Registration Counter		Consulting Doctor		For Diagnostic Report		At Pharmacy	
	No	%	No	%	No	%	No	%
0-4	42	33.6	13	10.4	0	0	50	40
5-9	52	41.6	47	37.6	0	0	29	23.2
10-14	19	15.2	30	24	1	0.8	21	16.8
15-30	11	8.8	31	24.8	17	13.6	25	20
31-45	0	0	2	1.6	4	3.2	0	0
46-60	1	0.8	2	1.6	8	6.4	0	0
61 -120	0	0	0	0	0	0	0	0
121 & Above	0	0	0	0	0	0	0	0
NA	0	0	0	0	94	75.2	0	0
NM	0	0	0	0	1	0.8	0	0
Total	**125**	**100**	**125**	**100**	**125**	**100**	**125**	**100**

4.3 Patient Perceptions On Various Aspects Of Service Provided

4.3.1 Privacy During Consultation

More than three fourth (78.4%) of the patients were satisfied with this aspect where as 21.6 per cent expressed that there was no privacy during consultation. (See table 2.7)

4.3.2 Suggested Any Diagnostic Test/ Not

Only 24 per cent of the patients responded 'Yes' while as high as 78.4 per cent report that they were not advised for any tests (See table 2.7). This figure, however, should not interpreted as indicator of either quality or efficiency of the hospital.

4.3.3 Doctor Prescribed Any Medicine / Not

Medicines were prescribed for all the patients under study.

4.3.4 Availability Of Medicines In The Hospital

All the medicines prescribed by doctors were not available in the hospital. Some of t patients were asked to purchase drugs from outside. This portion of the sample constitut only 13.6 per cent (See table 2.7).

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Table 2.6

Waiting Time At Different Points Of Service Delivery

Responses (In Minutes)	Registration Counter		Consulting Doctor		For Diagnostic Report		At Pharmacy	
	No	%	No	%	No	%	No	%
0-4	42	33.6	13	10.4	0	0	50	40
5-9	52	41.6	47	37.6	0	0	29	23.2
10-14	19	15.2	30	24	1	0.8	21	16.8
15-30	11	8.8	31	24.8	17	13.6	25	20
31-45	0	0	2	1.6	4	3.2	0	0
46-60	1	0.8	2	1.6	8	6.4	0	0
61 -120	0	0	0	0	0	0	0	0
121 & Above	0	0	0	0	0	0	0	0
NA	0	0	0	0	94	75.2	0	0
NM	0	0	0	0	1	0.8	0	0
Total	**125**	**100**	**125**	**100**	**125**	**100**	**125**	**100**

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Table 2.7

Patient Perception Regarding Different Services Provided

Responses	Privacy During Consultation		Suggested any Diagnostic Test by Doctor or Not		Doctors Prescribed any Medicine or Not		Got all the Medicines Prescribed or not	
	No	%	No	%	No	%	No	%
Yes	98	78.4	30	24	125	100	108	86.4
No	27	21.6	95	76	0	0	17	13.6
NM	0	0	0	0	0	0	0	0
NA	0	0	0	0	0	0	0	0
Total	125	100	125	100	125	100	125	100

4.4 Behaviour Of The Staff

Instead of asking specific questions regarding behaviour of different hospital staff separately, first we asked about the overall behaviour of the staff assigned for patient care. It is important to note that the behaviour of a majority of the staff (57.6%) was 'not very cordial'. If one add responses like 'just cordial', or 'not at all cordial', it would increase to around 67 per cent. (See table 2.8).

Table 2.8

Overall Satisfaction On The Behaviour Of Staff

Responses	No	%
Extremely Cordial	5	4
Very Cordial	35	28
Not Very Cordial	72	57.6
Just Cordial	10	8
Not at all Cordial	2	1.6
Don't Know	0	0
Not Mentioned	1	0.8
Total	125	100

Behaviour of specific sections of staff were also analysed.

4.4.1 Doctors

More than half the patients treated the services of doctors as 'good' or excellent and 28.8 per cent of treated it as fair. (See table 2.9)

4.4.2 Nurses

Regarding the behaviour of nurses, only 40.8 per cent of the patients considered it as either good or 'excellent'. Around 45 per cent considered it only fair. (See table 2.9).

4.4.3 Other Supportive Staff

Regarding this, only very few people (23.2) considered their services as good or excellent Around 42.4 per cent responded that it was 'fair'. Rest of the patients considered it as either average or 'below average'. (See table 2.9).

Table 2.9

Patient Satisfaction Regarding the Services Provided by Specific Categories of Staff

Responses	Doctors		Nurses		Other supportive staff	
	No	%	No	%	No	%
Excellent	6	4.8	13	10.4	6	4.8
Good	56	44.8	38	30.4	23	18.4
Fair	36	28.8	56	44.8	53	42.4
Average	21	16.8	18	14.4	38	30.4
Below Average	6	4.8	0	0	5	4
Total	**125**	**100**	**125**	**100**	**125**	**100**

4.5 Patient Satisfaction Regarding Other Services In The Hospital

4.5.1 Drugs

A major category of patients (57.6%) were of the opinion that the drugs provided in the hospital were `fair'. Nearly one third of the patients put it under 'good' and 'excellent'. Responses like 'average', and 'below average' were obtained from 8 per cent and 1.6 per cent of the patients respectively. (See table 2. 10).

4.5.2 Medical Equipment

Thirty six per cent of respondents were unaware of the quality of medical equipment used in the hospital. Thirty six (28.8 %), and 21 (16. 6%) of the clients expressed that medical equipment used in the hospital were 'fair' and 'average' respectively. (See table 2.10).

4.5.3 Surgical Equipment

As one would expect, a large number of patients (70%) were unable to give any comments on the surgical equipment used in the hospital. Among the rest, 8.8 per cent expressed their dissatisfaction on these equipment and described it as `below average' standard. For details regarding perception on surgical equipment see table 2.10.

4.5.4 Sanitation

About sanitary conditions in the hospital 39.2 per cent of clients treated it as 'average'. Only 24 per cent were of the view that sanitation in the hospital was 'good'. See table 2.10.

Table 2.10

Patient Satisfaction On Other Services Provided In The Hospital

Responses	Drugs		Medical Equipment		Surgical Equipment		Sanitation	
	No	%	No	%	No	%	No	%
Excellent	5	4	2	1.6	3	2.4	9	7.2
Good	35	28	16	12.8	5	4	30	24
Fair	72	57.6	36	28.8	10	8	20	16
Average	10	8	21	16.8	7	5.6	49	39.2
Below Average	2	1.6	5	4	11	8.8	16	12.8
Don't Know	0	0	45	36	87	69.6	1	0.8
Not Mentioned	1	0.8	0	0	2	1.6	0	0
Total	**125**	**100**	**125**	**100**	**125**	**100**	**125**	**100**

4.6 Hospital Cleanliness Rating

4.6.1 Floors

Nearly Three Fourth Of The Outpatients (71.2%) Reported That The Floors Of The Hospital Are Cleaned daily, and 25.6 per cent expressed that it is cleaned once in two days. See table 2.11.

4.6.2 Toilets

There are no toilets for outpatients inside the hospital. Even though various answers regarding toilet maintenance were obtained from clients, these answers might be due to the fact that the outpatients made use of the toilets meant for the inpatients. So the responses to this question might be treated as perception of outpatients on maintenance of toilets in wards. Nearly 35 per cent of the respondents were of the opinion that the toilets were not even cleaned once in a week. Only less than one per cent of them believed that it is cleaned daily. See table 2.11.

Table: 2.11

Cleanliness of Floors and Toilets

Responses	Floors		Toilets	
	No	%	No	%
Cleaned Daily	89	71.2	1	0.8
Once in two days	32	25.6	21	16.8
Twice a week	3	2.4	30	24
Weekly	1	0.8	18	14.4
Not even weekly	0	0	43	34.4
Don't Know	0	0	12	9.6
Total	**125**	**100**	**125**	**100**

4.6.3 Cleanliness Of Laboratory

Most of the outpatients were satisfied with the cleanliness of laboratory. Only 8 per cent expressed their dissatisfaction. See table 2.12.

Table 2.12

Cleanliness Of Laboratory

Responses	No	%
Satisfied	90	72
Not Satisfied	10	8
Don't Know	25	20
Total	**125**	**100**

4.7 Perceptions Regarding Provision Of The Following Services

4.7.1 Use Of Sterilized Needles

The general feeling among the patients was that sterilised needles are used for injections. Only 7.2 per cent had a difference of opinion regarding this (Table 2.13).

Table 2.13

Whether Sterilized Needles Used For Giving Injection

Responses	No	%
Yes	116	92.8
No	9	7.2
Total	**125**	**100**

4.7.2 Sterilization Of Dressing Room Equipment

Regarding this also, a very high proportion of patients responded positively. See table 2.14.

Table 2.14

Sterilization Of Equipment In The Dressing Room

Responses	No	%
Yes	110	88
No	10	8
Don't Know	5	4
Total	**125**	**100**

4.7.3 Cleanliness Of Dressing Room

Nearly 70 per cent of the respondents reported that the dressing rooms are 'very clean'. Out of the others, 19.2 per cent responded that it was 'clean'. For details see table 2.15.

Table 2.15

Cleanliness Of Dressing Room

Responses	No	%
Extremely Clean	2	1.6
Very Clean	87	69.6
Clean	24	19.2
Not so Clean	3	2.4
Not at all Clean	2	1.6
Don't Know	7	5.6
Total	125	100

4.7.4 Availability Of Drinking Water

Thirty two percent of the responses hinted at the availability of drinking water as 'quite adequate'. Another 16 per cent felt it 'adequate'. However, nearly 42 per cent felt it inadequate. See table 2.16.

As mentioned earlier, the only water source for both inpatients and outpatients is the bore well water. There is no other safe drinking water source in the hospital. Therefore, people have to rely on this unsafe water source for drinking purpose

Table 2.16
Availability Of Drinking Water

Responses	No	%
Immensely available	10	8
Quite adequate	40	32
Adequate	20	16
Not adequate enough	20	16
Not at all adequate	35	28
Total	**125**	**100**

4.7.5 Provision Of Health Education

When the outpatients were asked about the provision of any health education programme in the hospital, only 12.8 per cent of them responded positively where as a large majority (87.2%) hinted at the absence of health education programmes in the hospital.

Table 2.17
Provision of Health Education During Waiting Time

Responses	No	%
Yes	16	12.8
No	109	87.2
Total	**125**	**100**

5. Non Participant Observation

5.1 Non Participant Observation On Outpatients

To ensure that the information provided by OPs are correct, a non participant observation was made. Two trained investigators were sent to follow some patients and observe the time taken at each point of service delivery. Before following the patients we collected their name, address and the name of the doctors to whom they were referred from the OP registration clerk. In order to do this exercise we provided the investigators with stop

watches and trained them in its use. The results of non participant observation are given in table 2.18.

5.1.1 Results From Non Participant Observation On Outpatients

Out of twenty patients observed, except one, all of them waited for only 0-4 minutes at registration counter. This corresponds to our own survey result.

As many as 17 patients waited for only 0-4 minutes for meeting the doctor. Three persons waited for 4-5 minutes to meet the doctor. Even though this result is not the same as the responses obtained through survey, the magnitude of difference is very less. Only a difference of 1-2 minutes were found in the results. This is due to the fact that the respondents revealed only the approximate time taken at different counters which is bound to vary. Regarding the time spent by patients with the doctors also, the same problem was present.

Only six out of twenty patients observed, were suggested any kind of diagnostic test. A major chunk (14) were not suggested any tests. This result is very much in tandem with the survey results as nearly 76 per cent of the outpatients were not suggested any diagnostic test.

Almost all patients had to wait for 0-4 minutes for getting medicines. This result is also on par with the results obtained by the survey.

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Table 2.18

Time Taken at Different Points of Service Delivery: Obtained by Non-Participant Observation

	Waiting Time (in minutes)																			
Patients	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
At Registration Counter	0.42	0.52	1.51	2.12	0.52	1.42	1.03	2.09	1.09	2.15	1.14	1.59	2.14	2.13	1.7	1.09	2.14	4.09	2.6	1.32
To meet the doctor	2.03	5.31	3.14	2.09	2.03	3.15	4.04	3.31	2.18	2.35	2.18	7.09	3.08	2.39	2.24	2.61	6.04	1.32	3.19	4.05
For consultation	3.28	1.42	2.19	4.1	2.54	1.32	4.16	1.54	1.25	1.08	5.3	1.03	2.18	1.32	3.09	1.1	3.7	2.51	2.18	1.02
Getting lab test reports / giving the sample	32.3	29.62	29.05	*	*	24.01	54.03	*	*	*	*	*	*	*	*	*	33.07	*	*	*
At pharmacy for medicines	2.03	1.51	1.32	0.52	2.09	1.05	1.18	2.01	1.54	1.32	2.18	1.8	2.13	2.19	1.29	1.35	1.09	2.08	1.34	2.03
Age of the patient	20	12	29	15	30	26	55	23	33	22	39	38	54	23	12	39	53	29	11	28

Note: * Indicates that no tests were conducted for those patients.

5.2 Non Participant Observation On Inpatients

For IP service delivery, observations were made from 9 AM to next day 9 AM. We observed the sequence of events in the ward in the night by keeping ourselves awake through out the night. Even though it was an extremely difficult task , we could do it for all the wards. .

5.2.1 Non Participant Observation At Operation Theatre

Of the patients who were entering into the operation theatre (OT) for surgery, it was observed that the employees in charge of changing the dress of patients demanded a minimum of Rs.200 to Rs.500 regardless of the economic background and complexity of the case. They deny to do their duty if the money was not paid to them. This observation was made continuously for six days. When asked about this to the hospital authorities, they told they are simply helpless.

It was also observed that some of the employees who were inside the OT, take money in the name of the doctor, even though the doctor never wanted them to collect it for any reason. This was clarified with one of the surgeons who clearly stated that he never told any of the employees to take any bribe in his name.

Another unwarranted practice in the hospital needs mention. Even though the superintendent assigns certain staff for OT, the employees union leader of the lower staff and some of the hospital staff who are already working in the section defy the superintendent's order and demand the persons whom they want to be inside OT. Not only this, the allotment of such employees in different wards is not decided by the hospital superintendent but by the employees' leader. This was clearly observed during our visits and clarified from the superintendent also.

Even though nurses on night duty were expected to keep themselves awake till morning 8 A.M., it was observed that they simply give the medicines and injections to the patients as instructed by the doctor during their ward visits and go for sleep even before 11 P.M. Though there are some nurses who are sincere enough in their duty, a majority of them violated the rules.

The above mentioned points, though subjective to some extent, are useful in supplementing the patient survey results.

5.3 Results From Open Ended Questions

Two open-ended questions were asked to the respondents. One was regarding their opinion on the areas where the hospital should pay more attention. Other one was on their view on the overall satisfaction of the care delivered by the hospital. Same kind of responses were obtained for these two questions. Therefore we refrained from interpreting the results obtained from the second question. Multiple responses were obtained from the respondents. Therefore the number of responses would not be equal to the number of respondents. Responses obtained from the first question for OPs as well as IPs are given below.

5.3.1 Inpatient Suggestions On Improvement

Highest number of responses (35) were regarding supply of adequate and good quality medicine and provision of drinking water supply within the wards. Second aspect on which as many as 30 responses were obtained was regarding supply of adequate and good quality bread, milk and other food items along with safe drinking water. As many as 24 responses urged for the supply of safe drinking water only. For details regarding improvements expected by inpatients see Table 2.19.

Table 2.19
Improvements Expected In Inpatient Care

Improvements Expected	No. of Responses
1. Sufficient food / milk and bread/ good quality of food and drinking water	30
2. Provision of safe drinking water	24
3. Improvement of sanitation / cleanliness of wards / cleanliness of water tank/ Cleanliness of Hospital surrounding	17
4. Doctors should maintain proper time / doctors should treat well / proper medical care by doctor / Doctors should spend more time	12
5. Nobody should ask bribe	3
6. Behaviour of doctor and other staff should be improved / Doctors should behave politely with patients	5
7. Proper maintenance of toilets	19
8. Good quality of medicines / adequate supply of medicines	34
9. Adequate space between beds	3
10. Regular changing of bed sheets	15
11. Communication facility should be available for patients	4
12. Provision of Dustbins and spittoons	5
13. Good electricity facility	5
14. Round the clock availability of doctors	1
15. Should provide plates and Glasses	1
16 Adequate Staff	3
17. Lab reports should be sent to the wards immediately	2
18. Frequency of Doctors visit should be increased	1
NM	17
Total	**201**

5.3.2 Outpatient Suggestions On Improvement

As many as 61 responses were about the provision of safe drinking water supply for outpatients. Fifty three answers were related to the provision of bath rooms/ improvement in sanitation / cleanliness of hospital surroundings. While analysing the information on IPs we observed that maximum number of responses were regarding availability of good as well as adequate supply of medicine. Similar trend was also found in case of outpatients. Forty five responses were in support of this. Details regarding the suggestions given by OPs could be seen from table 2.20.

Table 2.20
Improvements Expected In Outpatient Care

Improvements Expected	No. of Responses
1. Adequate number of doctors	4
2. Better infrastructual facilities	1
3.Doctors and other staff should treat well / treat the patient perfectly / doctors should spend more time / Proper medical care /Proper attention and sympathy of doctors towards patients / Doctors should work hard./ Better understanding between doctors and patients/ Doctors should come in proper time	23
4. Good quality of medicine / adequate drugs / improvement in quality of services	45
5. Toilets, bathrooms should be available/ Improvement in sanitation/ Cleanliness of hospital surroundings	53
6. Behaviour of doctors/ other staff should be improved	6
7. Round the clock services should be provided	16
8. Provision of health education / should give proper suggestions.	4
9. Safe drinking water facility	61
10. Doctors should come regularly	6
11. Should avoid taking bribes	2
12. Private practice of doctors should be stopped	2
13. Emergency treatment / Diagnostic facility should be available	3
14. Pharmacist should explain how to take drugs	2
15. Sitting arrangement should be provided	1
16. No improvement is necessary	1
Total	230

APPENDIX

QUESTIONNAIRE FOR CONDUCTING PATIENTS SATISFACTION SURVEY IN KARIMNAGAR DISTRICT HOSPITAL INPATIENTS

Schedule No: **Date:**

I. SOCIO-ECONOMIC PROFILE

Q1. Name and Address of the Patient: _____

_____

Q2. Age: Q3. Sex: Q4. Religion: Q5. Caste: Q6. Rural / Urban

(Note: Please write name of the place as well as the Locality i.e., rural or urban in Qno.6)

Q7. House Ownership: 1. Own / 2. Rented

Q8. Education of the Respondent:

(1). Illiterate (2) Std I-IV (3)V-VII (4)VIII-X (5)Inter Pass (6)Graduation

(6) P.G. or Professional (7) Others Please Specify _____

Q9. Occupation; Occupation of the patient: _____

Q10. Occupation of the main earner of the family: _____

Q11. Number of days worked in last 30 days: _____

(This question should be asked about the main earner only. (for daily wage earners)

Q12. Earnings in last 30 days: _____

Q13. Other Earning Sources (Please Specify): _____

Q14. Total income of the family (Monthly):

1. Less than Rs. 500, 2. Rs. 501 - 1500, 3. Rs. 1501-3000, 4. 3001- 5000, 5. 5001- 10,000

6. 10,001 and above

II. QUALITY OF HOSPITAL SERVICES AND PATIENTS SATISFACTION

A. Reasons of Surpassing Lower Level Facility

Q1. Why did you come to this Hospital?

(1). Hospital is nearby, (2) Convenient Hospital Timings,

(3) Availability of doctors (4) Good Hospital Facility,

(5) Has facilities for emergency treatment, (6) Difficult to afford Private Hospitals,

(7). Others (if any) _____

Q2. Did you attend any nearby Community/Area Hospital or PHC before coming to this hospital?

1. Yes / 2. No.

Q3. If not why you did not utilise the lower level facility which was nearby?

(1).Doctors are not always available (2) No specialist doctor to treat me

(3) No convenient hospital timing (4) No proper diagnosis facility (5) My case was severe

(6)Others (if any) _____ (98) NA

B. Inpatient Waiting Time:

Q4. How much time did you have to wait at the following points of service delivery?

TIME TAKEN AT DIFFERENT PLACES OF SERVICE DELIVERY (FOR INPATIENTS)	
Different Stages	Time Taken (in Minuites)
Pre Admission	
1. Registration Counter	
2. Meeting the doctor	
3. For different General Lab Tests	
4. Electromedical and Imaging Tests	
After Admission	
6. For admission Procedure	
7. For taking patient to ward and immediate initial treatment	
8. For lab reports to reach in the ward	
9. For specific Treatment after confirmation of Diagnosis from lab reports	

For Surgical Ward Only: (Includes Major as well as Minor Surgeries)

Q5. How long did you have to wait for your surgery? _____ (in hours if more than one day in days)

Q6.Do you know any patient at this hospital dying after 48 hours of the operation?1.Yes / 2.No.

Q7. Do you know any patient dying within the operation theatre?1.Yes / 2.No

Q8. Give answer to the following questions regarding the Quality of services provided inside the ward.

Questions	Answers
1.Are the number of beds and the space between beds in the ward is adequate?	1. Yes / 2. No
2. Does the hospital have communication facility? (Intercoms)	1. Yes / 2. No.
3. Does the hospital have ambulance facility for emergency services?	1. Yes / 2. No
4. Do you have a locker at your bed site?	1. Yes / 2. No

C. Inpatient Satisfaction with Staff and other services provided by the Hospital (Rating)

Q9. Are you satisfied with the services provided by the following. (Put tick Mark)

Patients Satisfaction regarding services rendered by the Staff

FIVE POINT SCALE FOR MEASURING PATIENTS SATISFACTION REGARDING STAFF					
SERVICES	Excellent	Good	Fair	Average	Below Average
(1) Doctors					
(2) Nurses					
(3) Other Supportive Staff					

Q10. Are you satisfied with the behaviour of the staff?

1. Extremely Cordial 2. Very Cordial 3. Not Very Cordial

4. Just Cordial 5. Not at all cordial

Patients satisfaction regarding other service

PATIENTS SATISFACTION REGARDING OTHER SERVICES					
SERVICES	Excellent	Good	Fair	Average	Below Average
(a) Drugs					
(b) ~~Medical Equipment~~					
(c) ~~Surgical Equipment~~					
(d) ~~Ventilation~~					
(e) ~~Bedding~~					
(f) ~~Food~~					
(g) ~~Cleaning of Ward~~					

D. General Questions for IPs.

Q11. ~~When were you admitted in the hospital?~~ _____ ~~(date of admission)~~

Q12. When did you get discharged ?_____ (date of discharge)

Q13. ~~Did you have to pay any bill at the time of discharge? 1. Yes / 2. No.~~

Q14. ~~Do you think that you were discharged after your complete recovery~~. 1. Yes 2. No.

Q15. ~~How much time did it take to finish all the formalities~~ of discharge?_____ in minutes).

E. Hospital Cleanliness Rating

Q16. How often the bed sheets were changed?

(1) Daily (b) Once in two days (c)Twice a Week. (d) Weekly (e) Not even weekly

Q17. Are the floors of the rooms cleaned properly?

(1) Daily (2) Once in two days (3)Twice a Week. (4) Weekly (5) Not even weekly

Q18. Are the toilets in the Hospital Cleaned properly? Yes / No

~~(1) Daily (2) Once in two days (3)Twice a Week. (4) Weekly (5) Not even weekly~~

Services	Doctors	Nurses	Others
Day			
Night			

Q19. How is the water supply in the Hospital? adequate / inadequate

(1) Immensely available (2) Quite adequate (3) Adequate
(4) Not adequate enough (5) Not at all adequate

Q20. How is the electricity supply to the hospital? adequate / inadequate

(1) Immensely available (2) Quite adequate (3) Adequate
(4) Not adequate enough (5) Not at all adequate

Q21. Does the Hospital have Generator power supply if the power goes off? 1. Yes / 2. No

Q22. In the circumstances when there is no electric power how long do they take to supply Generator power?

1. Within 15 minutes 2. Within 30 minutes 3. Within one hour
4. After one hour 98. Not applicable.

Q23. Does the hospital gave sufficient dustbins and spittons: 1. Sufficient
2. Not Sufficient

Q24. Are you satisfied with the cleanliness 1. Extremely Clean 2. Very Clean 3. Clean
4. Not so Clean 5. Not at all Clean
of the laboratory? 1. Satisfied 1. Yes / No
2. Not Satisfied
99. Not Mentioned

Q25. Are sterilized needles used for giving Injection ? 1. Yes / 2. No

Q26. Are disposable needles used for taking the blood in the blood bank? 1. Yes / 2. No / 98. NA

Q27. Are disposable needles used for giving the blood to the patients? 1. Yes / 2. No / 98. NA

Q28. Are the dressing rooms are sufficiently clean?

1. Extremely Clean 2. Very Clean 3. Clean 4. Not so Clean 5. Not at all Clean

Q29. Do you Recommond this Hospital to others? 1. Yes / 2. No

Q30. Even though you are not satisfied, in case if you are recommending what are the reasons?

1. Good Facilities 2. Good Doctors Services 3. Good Nursing Care
4. Govt. Hospital Nature 5. Other Reasons (if any): _____

Q31. Are your attendants satisfied with the services of the Hospital? Yes / No

Q32. Are your visitors satisfied with the services of the Hospital? Yes / No

Q33. IPs: What improvement do you expect from the hospital so far as IP care is concerned?

Q34. Give your views on your experience while in the Hospital: Good/Bad

① Inpatient details

Name :- IP. No :-

Address :-

Date of Admission :-

Diagnosis :-

QUESTIONNAIRE FOR CONDUCTING PATIENTS SATISFACTION SURVEY IN KARIMNAGAR DISTRICT HOSPITAL OUTPATIENTS

Schedule No: **Date:**

I.SOCIO-ECONOMIC PROFILE

Q1. Name and Address of the Patient: _____

_____

Q2. Age: Q3. Sex: Q4. Religion: Q5. Caste: Q6. Rural / Urban

(Note: Please write name of the place as well as the Locality i.e., rural or urban in Qno.6)

Q7. House Ownership: 1. Own / 2. Rented

Q8. Education of the Respondent:

(1) Illiterate (2) Std I-IV (3)V-VII (4)VIII-X (5)Inter Pass (6)Graduation

(6) P.G. or Professional (7) Others Please Specify _____

Q9. Occupation: Occupation of the patient:_____

Q10. Occupation of the main earner of the family:_____

Q11. Number of days worked in last 30 days:_____

(This question should be asked about the main earner only. (for daily wage earners)

Q12. Earnings in last 30 days:_____

Q13. Other Earning Sources (Please Specify): _____

Q14. Total income of the family (Monthly):

1. Less than Rs. 500, 2. Rs. 501 - 1500, 3. Rs. 1501-3000, 4. 3001- 5000, 5. 5001- 10,000

6. 10,001 and above

II. Outpatient (OP) Waiting Time

Q1.As an OP how long did you have to wait at registration counter?_____ (in minutes).

Q2. How long did you wait to consult the Doctor? _____ (in minutes).

Q3. Was there adequate privacy during consultation? 1. Yes / 2. No.

Q4. Were you suggested any diagnosis test by the doctor?. Yes/ 2. No.

Q5.If yes how long did you have to wait for your diagnostic report? _____ (in minutes).

Q6. Did the doctor prescribe any medicine for you? 1.Yes / 2.No.

Q7. If yes then how long did you have to wait at the Pharmacy ? _____ (in minutes).

Q8. Did you get all the medicines prescribed by the doctor? 1. Yes / 2. No.

III. Outpatients Satisfaction with Staff and other services provided by the Hospital (Rating)

Q9. Are you satisfied with the services provided by the following categories of staff?(Put tick Mark)

Patients satisfaction regarding the services rendred by the Hospital staff

FIVE POINT SCALE FOR MEASURING PATIENTS SATISFACTION (OUTPATIENTS)					
SERVICES	Excellent	Good	Fair	Average	Below Average
(1) Doctors					
(b) Nurses					
(c) Other Supportive Staff					

Q10. Are you satisfied with the behahiour of the staff?

1. Extremely Cordial 2. Very Cordial 3. Not Very Cordial

4. Just Cordial 5. Not at all cordial

Patients Satisfaction With other Services Offered in the Hospital.

MEASURING PATIENTS SATISFACTION FOR OTHER SERVICES					
SERVICES	Excellent	Good	Fair	Average	Below Average
(a) Drugs					
(b) Medical Equipment					
(c) Surgical Equipment					
(g) Sanitation					

IV. Hospital Cleanliness Rating by OPs

Q11. How often do you think it is the floors are cleaned?

(1) Daily (2) Once in two days (3)Twice a Week. (4) Weekly (5) Not even weekly

Q12. Are you satisfied with the cleanliness of the laboratory? 1. Satisfied

2. Not Satisfied

Q13. Are sterilized needles used for giving Injection ? 1.Yes / 2. No

Q14. Are the equipments used in the dressing rooms sterilised? 1.Yes / 2.No

Q15. Are the dressing rooms are sufficiently clean?

1. Extremely Clean 2. Clean 3. Very Clean 4. Not so Clean 5. Not at all Clean

Q16. Did the Hospital charge for the services rendered? 1. Yes / 2. No

Q17. If yes how much time did it take for billing process?_____ (in minutes)

Q18. What improvements do you expect in OP care? _____

_____

_____

Q19. Give your views on your experience of attending as an OP:_____

Q20. Are drinking water facilities available for OP area?

(1) Immensely available (2) Quite adequate (3) Adequate

(4) Not adequate enough (5) Not at all adequate

Q21. Are you getting any health education programme during waiting time? 1.Yes / 2.No

Q22. What is your opinion about the toilet maintenance at OP unit ?

(1) Cleaned Daily (2) Once in two days (3)Twice a Week. (4) Weekly (5) Not even weekly